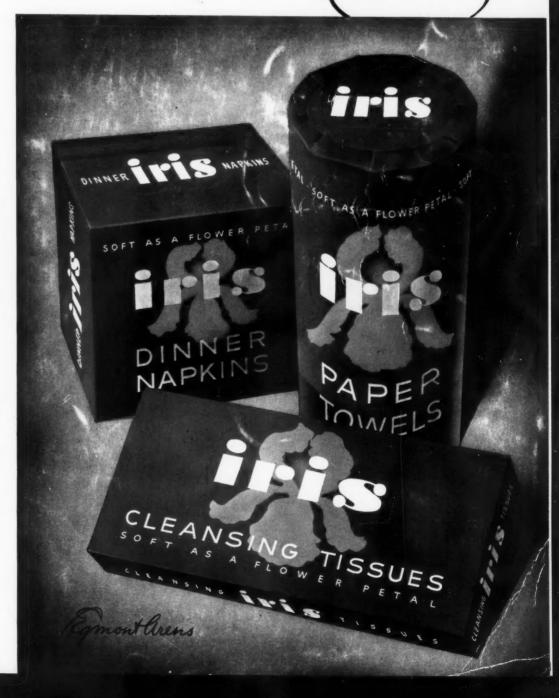
packaging

For cover story see p. 115



April 1948

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HOW TO PREPARE and USE

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ADDRESS: 270 Madison Avenue, NEW YORK 16; 3641 So. Washtenaw Ave., CHICAGO 32; 735 Battery Street, SAN FRANCISCO 11; and other principal cities. IN CANADA: Meredith, Simmons & Co., Ltd., Toronto. IN ENGLAND: National Adhesives, Ltd., Slough.

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During A.M.A. Packaging Convention, relax at our "Cabin in the Woods" Booth No. 116 and 117A, and at our Hotel Cleveland suite.



PRECISION is the first principle of good workmanship. It is the ideal of the craftsman; the idea back of every job well done. Products of fine quality, service that sparkles, and good customer relations are characteristic of organizations that have a background of precision—both in manufacture and thinking. Depend on it. Phoenix Metal Cap Co., Chicago 8 and Brooklyn 18.

packaging



Vol. 21 No. 8 April 1948

GENERAL

- Package copy planning

 Product acceptance depends on proper use by consumer; that's why General Foods has whole Consumer Service editorial division devoted to directions on packages.
- This month's Cover Package 115
- Ready for the Packaging Show
 Complete details of 1948 Conference and Exposition opening in Cleveland April 26, with tear-out diagram, map and program.
- Ad box
 Ad illustration reproduced in 6 colors on folding box integrates promotion and packaging.
- Margarine squeeze
 First full story on the color-kneading plastic pouch, which now has three new users.
- Apple packages
 Washington State data on consumer packs.
- Wrap-around pricer
 Die-cut header for mass display takes no space other than package surface.
- Side-seam opening
 Simple change in directions enhances utility of metal-end fibre cans for frozen foods.
- Design Histories 132
- Aluminum cans
 Norway uses them as food containers.
- Roll-on capper
 Taylor Wine adopts high-speed machine.
- Bales potentials of printed transparent bags and wraps. By John M. cowan.
- Stoker in a carton Cuts 43% of cost, 1/3 of shipping space.
- Packaging Pageant 144
- Punch-out window
 Displays athletic balls in the package.
- Display bottles
 Plastic replicas form promotion pieces.
- New machinery
 Pictorial review of 16 new developments.

- Steel balls in unit lots 160
 For convenient and economical distribution.
- Festive-occasion cakes
 Window box offers new profits for bakers.
- Improved unit packages
 Positioned printing and double-diagonal crimp seal give refinement to new packets.
- Display Gallery 166
- Progress report on technical research to establish test specifications. By w. B. LINCOLN, JR.
- Best folding boxes
 Folding Paper Box Assn.'s '48 awards.
- Static eliminator
 For acetate film in tomato pre-packaging.

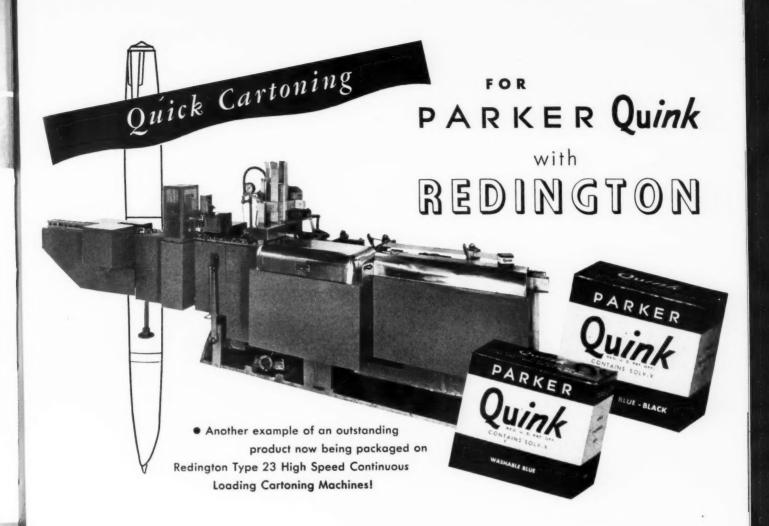
TECHNICAL

- Vacuum tester
 Accepts or rejects containers according to deformation of tops. By Joseph Razek, ph.d.
- Closure liners

 Essential requirements of facings and some comparative data. By J. M. WHEATON.
- Aluminum foil
 III. Its performance with packaged products.
 By JUNIUS D. EDWARDS and D. B. STROHM.
- TAPPI test methods
 Discussion of new standards for WVP at zero, odor permeability and other factors.
- Questions and Answers 194

DEPARTMENTS

- Equipment and Materials 204
 Plants and People 214
- Plants and People 214
 For Your Information 224
- U. S. Patents Digest 232



The world-famed Parker Pen Company of Janesville, Wisconsin, achieves maximum flexibility in production, by cartoning its 2 and 4 ounce bottles of Parker Quink on Redington machines.

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First, the bottles are taken into the machine via intake conveyor. They are transferred gently to a horizontal position in the article conveyor. Magazine-fed cartons are expanded, and bottles inserted. Automatic tucking in of the end flaps, after code date is stamped on, completes the high speed operation.

All of these cartons are reverse-tuck, and it is of interest

to note that Redington machines handle reverse-tuck or straight-tuck cartons with equal facility.

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EDUCATIONAL OPPORTUNITY

SEVERAL THOUSAND packaging specialists will gather in Cleveland when the A.M.A. Conference and Exposition meets there the week of April 26.

Their number is increasing—has been increasing steadily for several years. The title "packaging engineer" (or a reasonable equivalent) is appearing with greater frequency in mercantile and industrial organizations. Calls for qualified people to handle packaging responsibilities are increasing accordingly.

The term "packaging engineer" is not easy to define and the calls are not easy to fill. Often the work of one packaging engineer bears little resemblance to that of another, but in most cases that work is a compound of science, ingenuity, art and common sense. There is, of course, no such degree as packaging engineer. Courses are not yet available for the person seeking all-around preparation for packaging activity, though the time will doubtless come when well-organized training, leading to a degree, will be offered by progressive institutions.

In the meantime, the best "refresher courses" are provided by conferences like the A.M.A. The sessions are competently prepared, well organized, conducted in a businesslike manner and those who attend are there for business. The sponsors take great pains to ascertain what subjects are uppermost in the minds of people in all divisions of the packaging field and the Conference has attained sufficient prestige to attract speakers best qualified to discuss those subjects. The commercial exhibits serve as a laboratory in which to see new materials and equipment demonstrated.

Since its inception nearly two decades ago, this Conference each year has established new records for attendance. It has kept pace with the growing importance of packaging. It is to be regarded as a stimulating educational opportunity.



The Editors

Tooled for Your Job!



Sefton meets your packaging problems of ge Shape T

Sefton's diversified tooling permits a wide range of selection for one or a whole family of packages. And then there is the plus value of the string opening can with its merchandising features of . . .

- factory sealed tamper proof
- easy-to-open full opening
- easy and positive reclosure

Section has the complete range of fibre cans.

- SPIRAL AND CONVOLUTE
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- PAPER AND METAL ENDS
- ALL STANDARD OPENINGS AND **RECLOSURES**
- TUBES AND CANS

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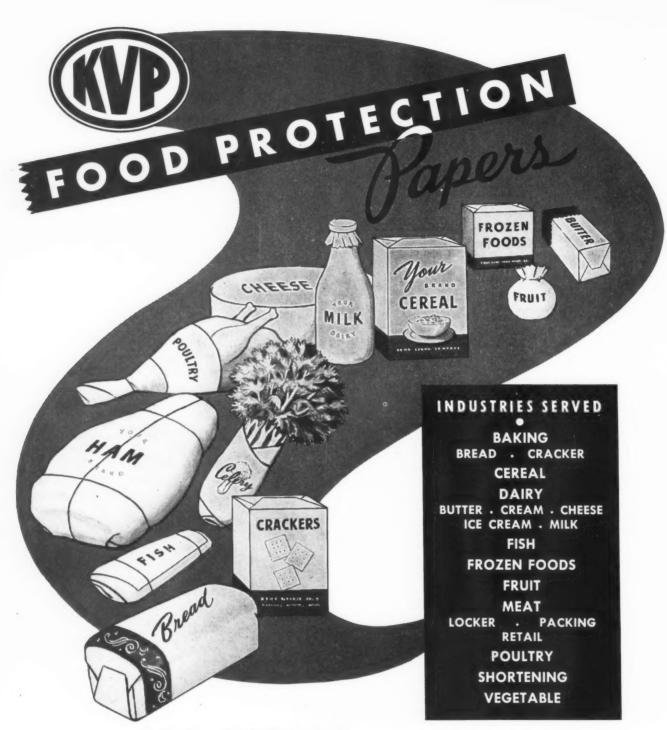
Plus the string-opening can.





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HYCAR imparts valuable properties to pulp and paper

HYCAR latex added directly to the pulp in the beater or head box, or used as an impregnant for paper, imparts valuable properties not otherwise readily obtained.

Tear and wet strength are considerably increased. Resistance to oils, solvents and chemicals is obtained, with retention of good aging properties. The addition of Hycar also insures excellent flex life and scuff resistance, and in thick papers prevents separation of the laminations.

Thus, better physical properties may be obtained in high grade pulp. In other cases the use of lower grade stock may be permitted because of improved physical properties obtained by the use of Hycar latex. Paper is made adaptable to fields where it is not now used.

Present and potential applications for papers of this sort range from wallpaper to insoles, from gaskets to leather replacement material, from shelf liners to packaging papers.

HYCAR latex is very easy to use. In most applications no vulcanization is required. Normal drying times are used. And HYCAR latex is an inherently safe material to handle. No solvent system is needed.

We would be glad to work with you on any problems relating to the use of HYCAR latex. For more information, please write Department H1-2. B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.



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. . BUILDS BRAND PREFERENCE!

Like a smartly dressed woman—a product that is packaged with an eye toward consumer preferences will always get more attention! Today's merchandising trends demand a package that's on its toes—a package that has color, appetite-appeal, display value—and is dressed in the latest sales fashion.

Milprint packaging experts specialize in surveying your packaging problems, from production to sales. Why not let them help you build new brand preference with a new—and smarter package.

PACKAGES BY MILPRINT Packaging Headquarters to American Industry

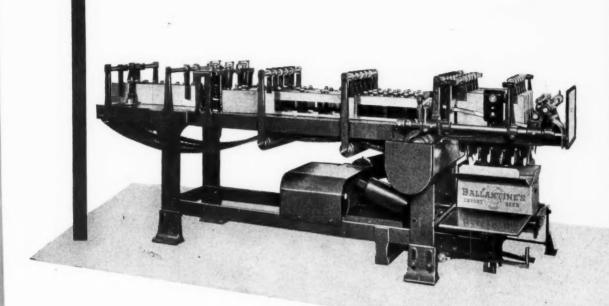
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Packs Bottles Faster with Less Maintenance



There are three reasons for the sustained, record high speeds delivered by the Model 830 Bottle Packer. None of the three are secret ... you can spot them all in the illustration.

First, note the utter simplicity of design. Like all Standard-Knapp machines, Model 830 has no complicated insides to get out of order. It's designed to do a basically simple job the easiest, fastest way.

Secondly, mark its massive, rugged construction. It's solidly built. It has the strength to operate at maximum speed without rest, without repair, without developing internal stresses or structural weaknesses. Over the long haul, year after year, this machine packs faster because it packs with less time out for hospitalization.

The third reason lies in the easy accessibility of parts for routine upkeep. There are no hardto-get-at danger points, no hidden lubrication fittings. Upkeep crews find it easy to lubricate, easy to clean. Consequently, there's no danger of stoppages due to neglected maintenance routines and there's greater assurance of peak performance all the time.

If you're about to add to your existing bottle packing equipment, or if you're seeking to replace slow, unsatisfactory machines, write for detailed information on the Model 830.

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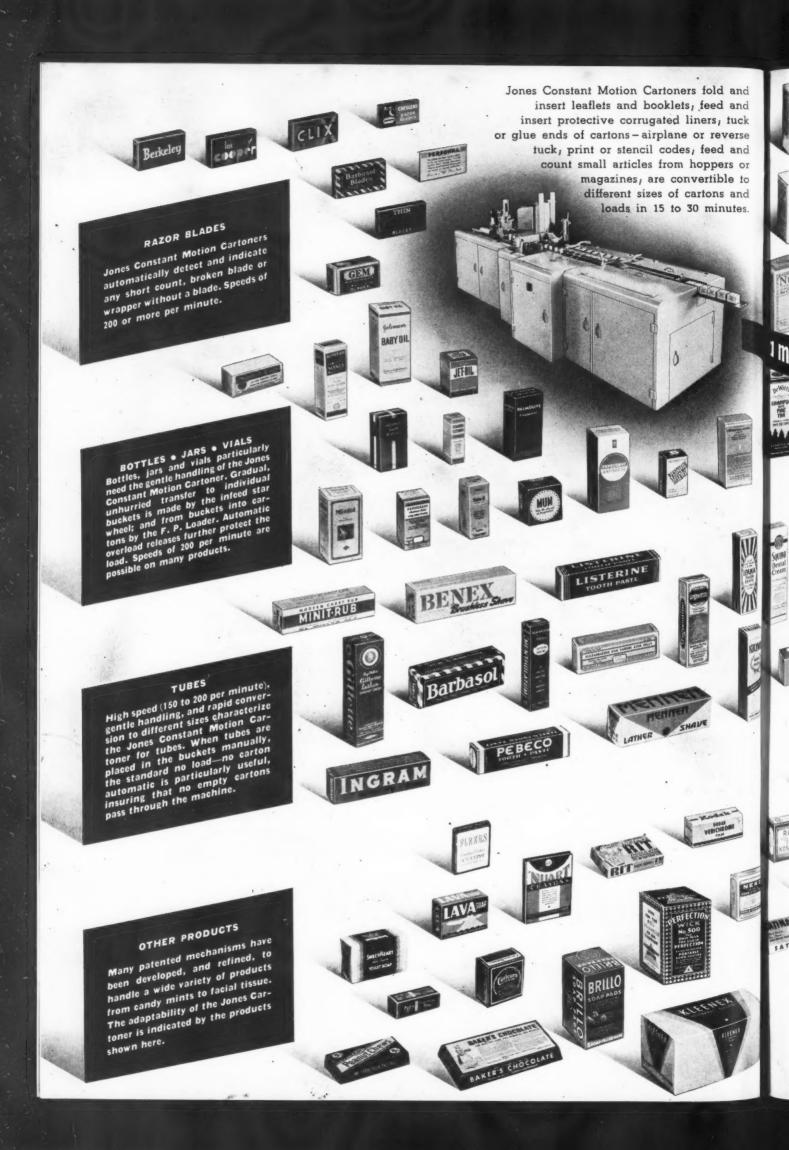
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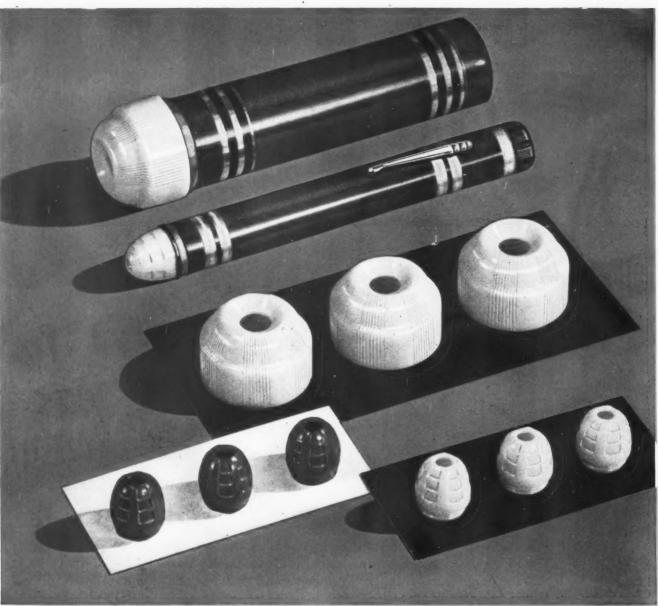
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IN ACTION - BOOTH 605 - PACKAGING EXPOSITION

CINCINNATI, OHIO



These plastic head-pieces glow when lit—shining examples of O-I's low-cost, high-volume production.

Shining Examples OF SMALL PLASTICS ** Big Volume



THE SMALL PLASTIC item needed in big volume at low cost is our specialty.

Our plastic engineers are expert at matching *design* with the most efficient molding process—are ready to fill your order promptly.

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OWENS-ILLINOIS GLASS COMPANY

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Pantry Packaging

Backed by big-time newspaper advertising (as shown above) and radio and display promotion, Reynolds Wrap (Reynolds Aluminum Foil) is fast becoming a big favorite with housewives. They are thrilled with the protective quality of this "wonderfoil." Thousands are buying it every

day for their Pantry Packaging. If you want your package to get into the house-wife's pantry, let us show you how to give your package added buy appeal by using Reynolds Alumínum Foil for proven protective packaging and arresting display. Keynolds Metals Company, Richmond 19, Virginia





Reynolds Aluminum Foil

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YEARS AND YEARS OF Experience

TUBE S

For half a century, and more, consumers and manufacturers, alike, have been buying and liking New England Collapsible Tubes. Today's great grandfathers started buying toothpaste in our tubes when they were young; the modern young generation of now-aday buys SEAFORTH Shave Cream and many another nationally known product in streamlined New England "Sheffield Process" Collapsible Tubes. Our many years of experience and progress in the making of better Tubes brings you a know-how that is invaluable. Our craftsmanship has been developed to a high degree

of perfection, assuring fine uniform quality, outstanding sturdiness of tube metal thru an exclusive method of melting, mixing and tempering raw metals, and, crisp and clean tube decoration. We can even fill your bulk product, as illustrated at the right, if your tube filling facilities are inadequate. Discuss your tube packaging problems with one of our trained field men. phone, or write, now.



NEW ENGLAND COLLAPSIBLE TUBE CO.

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Spotlight your products with

FOIL CARTONS

that Reflect an Invitation to



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Board Mills: lockport, N. Y.; Thomson, N. Y.; Urbana, O.

Victory Mills, N. Y.; Syracuse, N. Y.; Brooklyn, N. Y.; Cohoes, N. Y.; Springfield, O.















appeal • the ultimate in packaging attraction. see the linest in quality re-use containers, all custom made to each packager's specif. teations at booth 210, A.M.A. Packaging F. sposition, Cleveland



The G. K. Smith Company

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Spotlights Your Product



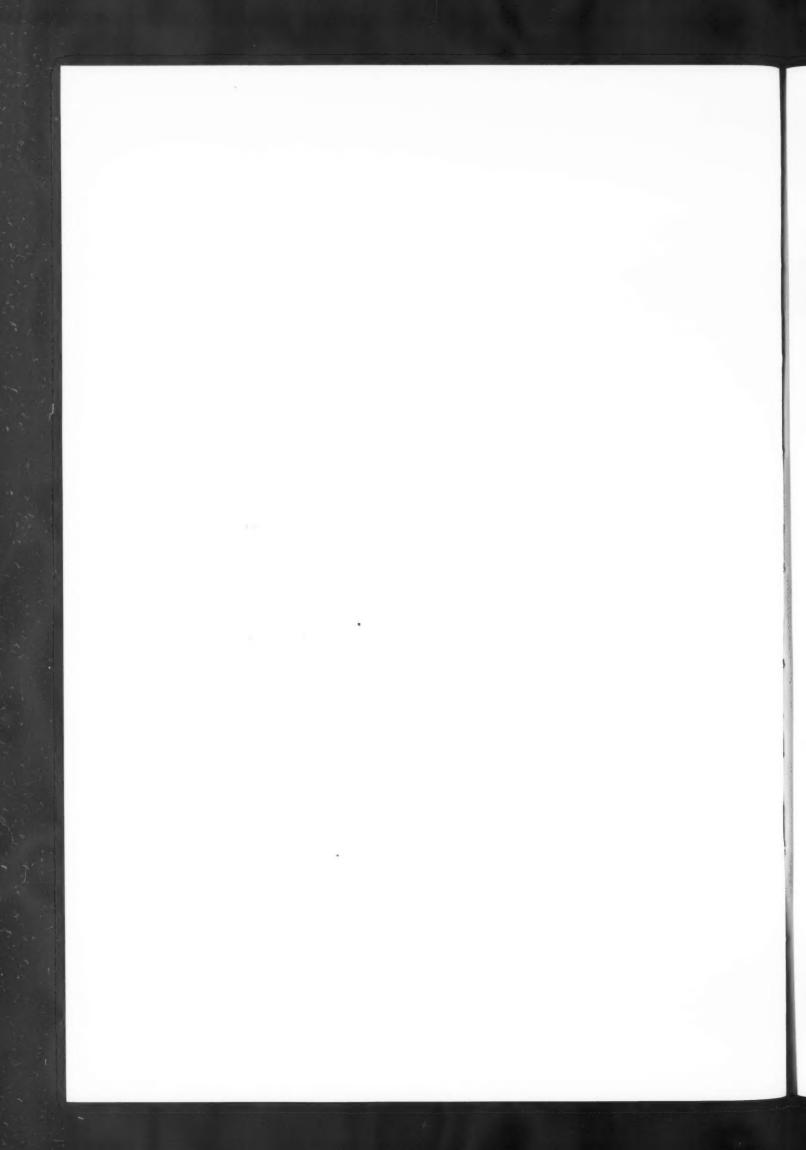
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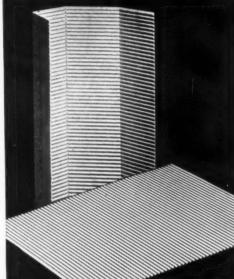


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ATTRACTIVE COLORS

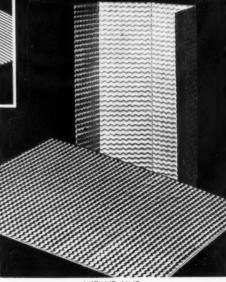
- NATIONAL RED
- NATIONAL BLUE
- AZURE BLUE
- FOREST GREEN
- APPLE GREEN
- NILE GREEN
- CANARY YELLOW
- PEACH
- ORCHID
- BLACK

OR WHITE



STRATE LINE

PRODUCTS Choice OF TWO PATTERNS



WEAVE LINE

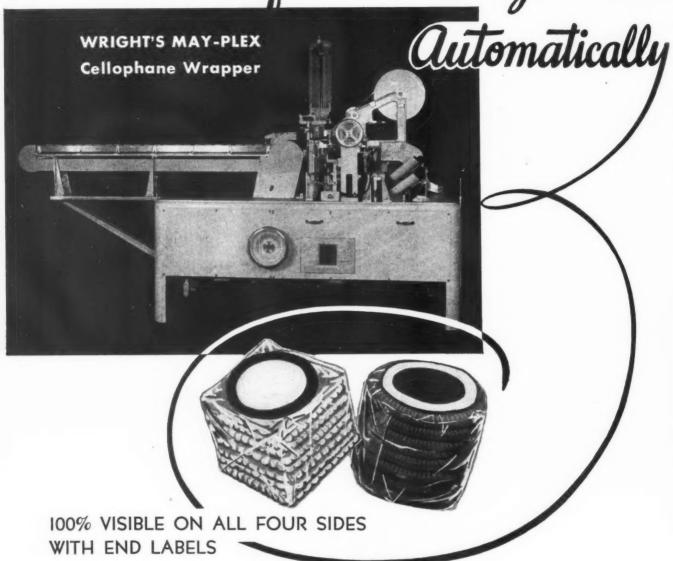
Beautify Your Package with Cushoned Protection

SHIELD-PAK as liners and pads in your set-up and folding cartons gives your product eye-appealing, SALES appealing color attractiveness PLUS corrugated-cushion protection. SHIELD-PAK is a single-faced corrugated paper produced in two distinctive designs and in a sufficiently wide variety of standard colors to comply with the established color schemes of most manufacturers. If, however, you desire a special color, we can meet your requirements. Send for complete sample kit today—there's no obligation, of course.

WRITE FOR INFORMATION THAT MAY SOLVE YOUR PACKAGING PROBLEM

Manufacturiers of CORRUGATED PAPER PRODUCTS

Now...the Preferred Package made



See Wright's May-Plex Cellophane Wrapper At The Packaging Show

Double Feature!

The new Hy-Tra-Lec Automatic Weigher, Model C also will be shown in action at Wright's booth at the Packaging Exposition. Don't miss this machine if you package a free flowing or semi-free flowing dry product and want greater accuracy at high speed in your weighing-filling operations.

* WRITE FOR LITERATURE

Here, for the first time, is a high speed automatic machine for wrapping, sealing and **end labeling** Bakery Products such as cracker sandwiches, fig bars, and cookies, **without** collar, cardboard or other support.

See this machine in action at the Packaging Exposition in Cleveland, April 26-30.



AFFILIATED WITH THE SPERRY CORPORATION

500 Calvin Street

Durham, North Carolina

"Pioneers Since 1893 In Automatic Packaging Machinery"

Where can you use the new





MARVINOL® RESINS?

Weigh these advantages of Marvinol, the new vinyl resin, against your packaging problems:

STABILITY! Marvinol-based plastics . . . whether film, coated materials or rigids . . . are

tougher, more flexible, have better resistance to tear, wear, heat, cold, sunlight, oils, acids. They're waterproof, unaffected by mold or fungi, will not discolor on aging, may be tasteless and odorless, have great dimensional stability.



VERSATILITY!

Packages made from this low-priced raw material are non-inflammable, may be heat-

sealed, can be crystal clear, brilliantly or delicately colored. Marvinol formulations are light in weight, smoother to the touch, have high molecular weight yet are easy to process or work.

UNIFORMITY! Marvinol resins are a development of
Martin research and Martin's quarter-century of plastics experience. They're
being produced in the world's most modern chemical plant to assure you of
unexcelled uniformity. The Glenn L. Martin Company does not
compound or fabricate in the plastics field, but we will be glad to
supply you with a list of companies now processing

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The Glenn L. Martin Company,
Baltimore 3, Maryland.





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Resins, Plasticizers and Stabilizers Produced by the Chemicals Division of NALINSTITUTION



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MAX. SPEED 4965 R.P.M. TESTED PHILA. PA.

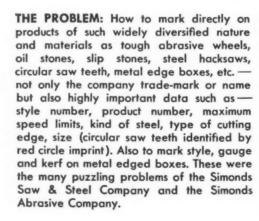


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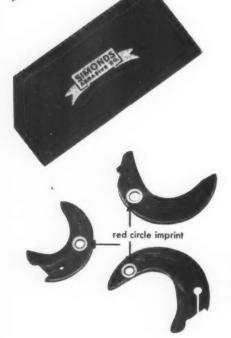
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Markem

EASILY SOLVES DIFFICULT Marking PROBLEMS



THE SOLUTION: Full use of Markem methods, machines and special inks. Now, thanks to Markem, the famous name "Simonds" and other highly important technical data really become a part of the products themselves, thus avoiding chance of error in repeat ordering. Products and boxes are marked swiftly, attractively and economically. No wonder the Simonds companies are pleased — just as you will be with Markem equipment which permits rapid type changes in variable type.

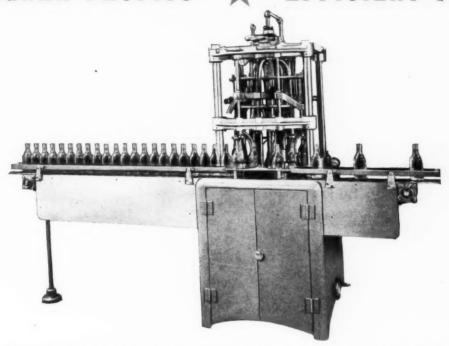


LET MARKEM solve your problem. MARKEM service includes method, machine and inks to meet your individual requirements of speed, material and purpose, whether in marking boxes, bottles, labels, or the product itself. Tell us your needs; we'll do the rest.

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MACHINES LOWER YOUR PACKAGING COSTS

GEAR YOUR PRODUCTION
FOR HIGHER PROFITS * EFFICIENT FILLING



mrm fully automatic rotary filler for viscous * foamy * still liquids

WHY AN mrm?

- ★ VERSATILE Adjustable to glass and metal containers, all shapes and mouth openings, including sprinkler top bottles and open top cans.
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mrm MANUFACTURES A COMPLETE
LINE OF FILLING AND CONVEYING EQUIPMENT.

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CUSTOM DESIGNED AND BUILT FILLERS AND CONVEYORS

193 BERRY STREET

BROOKLYN 11, N. Y.

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APRIL 1948

23

There's GOOD NEWS tonight

... and every night, for the fellow who has Wellworth pickles on hand. They add just the right touch to that bedtime snack.

Like so many other prominent packers, the Wellworth Pickle Works of Paterson, N. J., likewise find Crown Closures "good news." Crown methods of precision manufacture give these closures a uniformity that means trouble-free application on production lines and uniformly dependable sealing. There's satisfaction too, in knowing that Crown furnishes a wide variety of liners to meet the individual sealing requirements of any product... and of course, the famous Deep Hook Thread, available only on Crown Closures, gives the extra sealing pressure that assures complete dependability. Crown Cork & Seal Co., Baltimore 3, Md. World's Largest Makers of Metal Closures.

CROWN CLOSURES

Approved by millions of housewives

TRANSPARENT PACKAGE by Traver ...



Delicate pinks or luscious, ripe reds radiate sales-appeal through Traver transparent packages. These eye-catching overwraps formed from Traver's expertly printed roll or sheet stock retain the glossy smoothness so necessary to an attractive consumer package.

The Atomic brand of Levy & Zentner has added power with Traver overwraps.



Crivella's "Select Pack" tells the story —smooth transparency of Traver packages allows selection of perfection.



Each tomato is clearly visible beneath Traver's carefully printed sales label No distracting wrinkles or smudges

Photos show Traver transparent sales packages in actual use.



370 W. ONTARIO STREET . CHICAGO 10, ILLINOIS

CONVERTERS AND PRINTERS OF CELLOPHANE, PLASTICS, ACETATES, FOIL AND GLASSINE

APRIL 1948

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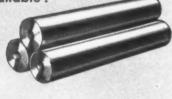
25

Alcoa's "do-you-know" series for package buyers

A FOOD PACKER ASKS:



QUESTION: "What forms of aluminum foil are commercially available ?"





INNER LINER OR OUTER WRAP?..."Where will foil give best protection?"

ANSWER: If your problem is loss of moisture or flavor, use Alcoa Aluminum Foil as an inside liner. It has a moisture-vapor transmission rate of just about zero. If protection against absorption of foreign odors and moisture is the main objective, use Alcoa Foil on the outside of the package. Here, sparkling Alcoa Foil will give you extra eye-appeal at no extra cost.

ANSWER: Plain Alcoa Foil (.006" to .00035" thick) is available in coils in widths up to 36". In widths up to 26" it also is supplied embossed, coated with protective heat-seal coatings and in decorative colors.

Leading converters also offer Alcoa Foil bonded to paper and synthetic sheeting suitable for package structures

Send for complete "do-you-know" series

Answers to other important packaging problems are yours for the asking. For copies of the complete "do-youknow" series, for more information on better protective

packaging, write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pa.



COA ALUMINUM FOIL

Now ready for you:—A new book showing every type of finish presently made in packaging paper, together with some helpful information. Designed especially for new-comers in the packaging business and for old-timers who know most, but not all the answers. Will gladly send to everyone interested, provided they fill out this coupon, or request the book on their business stationery.

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| 165 W. Berks Street | |
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| Send new book showing all finishes of packaging papers to | |
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. . . a complete organization skilled in
the creation and production of promotional
and merchandising point of sale counter
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Call for all



COMPANY, DISPLAY DIVISION, Monroe, Michigan RIVER RAISIN PAPER COMPANY · CORRUGATED AND SOLID FIBRE SHIPPING CONTAINERS PACKING MATERIALS · FIBRE BOARDS · CORRUGATING STRAW · SILICATE OF SODA

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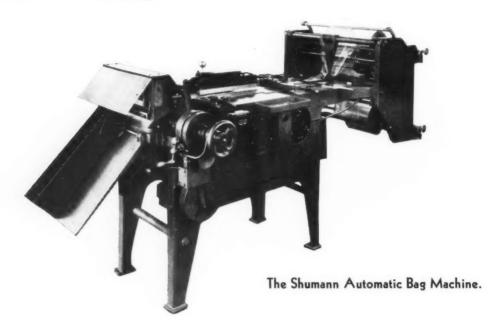
GING

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29

Question: How Much Does This Bag Machine Cost?

Answer: Nothing!



That's right—The Shumann Automatic Bag Machine pays for itself in a remarkably short time and then starts saving money for you every day of operation. Even small volume users of heat-sealed bags have found it pays to make their own bags. Their savings are much greater than monthly payments on the machine.

And the Shumann Automatic Bag machine is right at the top in larger daily production, less waste, less down time, and lower operating cost. No one knows the expected life of these machines because early models built in 1930 are still operating efficiently. None have worn out!

Would you like to know how much YOU can save by using the SHUMANN Automatic Bag Machine? Just tell us your present consumption of heat sealed bags and we will give you a quick estimate. No obligation, of course.

VISIT OUR BOOTH #201 A.M.A. PACKAGING SHOW

SHUMANN EQUIPMENT CO.

1206 E. CARSON ST.

PITTSBURGH 3, PA.

"Everything in Packaging"



FOR PACKAGING THAT TELLS ALL ... Sells // orl

Come to the Show! Call on Celanese . . .

For transparent containers that are making sales history

For new methods of prepackaging fresh foods

For heat-sealing of cellulose acetate films, rigid and flexible

For high speed machine wrapping with cellulose acetate

For stunning new sales packages

For the latest ideas in packaging

COME TO BOOTH IOI, PACKAGING EXPOSITION

Municipal Auditorium, Cleveland, Ohio, April 26th to 30th CELANESE CORPORATION OF AMERICA Plastics Division, Dept. P-1 180 Madison Avenue, New York 16, N.Y.

Celaneses

Plastic

*Reg. U. S. Pat. Off.

APRIL 1948

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Make Your Identity



Stick

...and there's no better way than with a STAR BRAND ADHESIVE.

STAR BRAND ADHESIVES give you this assurance:

No matter what your product or your package . . .

if it's labeled manually or by machine, there's a

Star Brand Adhesive to do your job dependably and flawlessly.

There's comfortable assurance and solid satisfaction in

knowing that your name, trademark and goodwill arrive

into consumers' hands intact and factory-fresh.

More important, it's plain good business!

Ceaseless research, finest raw materials, and carefully

controlled compounding puts the reliability into

Star Brand Adhesives that means RESULTS.

- STAR Case Sealing Glue
- STAR Folding Box Glue
- STAR Hot & Cold Pick-Up Gums
- STAR Tin Paste
- STAR Brightwood Gum

- STAR Carton Sealing Glue
- STAR Bench Paste
- STAR Tube Glue
- STAR Lap End Paste
- STAR Tightwrap Glue



Send for samples without obligation.

Bingham Adhesives

BROTHERS COMPANY

SIN CE 1826

406 Pearl Street 1315 R

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this 4-Color

Process Print Job

on Cellophane!

Not "out of this world" perhaps...but here is something definitely exciting—four-

color process printing with perfect register on cellophane. This box liner for the United Chocolate Refiners (Inc. was produced by Nashua. Perhaps you have a luxury package or product that can profit by using this advanced technique.



NASHUA GUMMED AND COATED PAPER COMPANY

NASHUA, NEW HAMPSHIRE



See us at Booths 211-214 Packaging Exposition, April 26-30, at Cleveland

APRIL 1948

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33

THIN METHACRYLATE SHEET IS HERE



Add another first to Plax's long list of innovations. This time it is methacrylate sheet that is really thin. It is available now and you can order for immediate delivery. Thicknesses range from .010" through .045."

You know methacrylate — its crystal clarity, brilliance of finish, dimensional stability and durability. Well, here are these advantages under your hand for the first time in *thin* sheet form. You can have it run-of-mill or press polished.

You probably have had all sorts of ideas for a material like this. It lends itself admirably to numberless applications like boxes, radio dial coverings, spacers, watch crystals, other drawn parts, light louvres, etc.

CHART ON "HOW TO USE PLASTICS"

Now available for the asking is a table of properties for six materials available from Plax in various forms and formulae. This has been incorporated in the Plax catalog, which also contains helpful information on the primary uses of each material.

A copy will be sent promptly upon receipt of your request.

Between the resources of Shaw Insulator Company, Irvington 11, N. J., and Plax Corporation, Hartford 1, Conn., you can find help on virtually every material and method in plastics today.



P. O. BOX 1019 ★ HARTFORD 1, CONNECTICUT In Canada — Canadian Industries, Ltd., Montreal ane.

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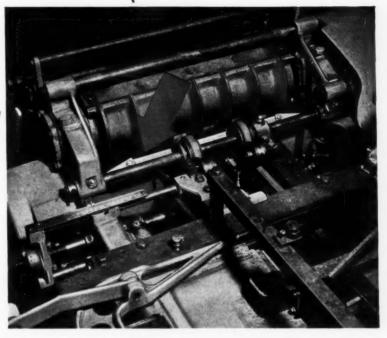
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01

Makes it Easy

TO WORK WITH

high-tic Static MATERIALS



ANOTHER PRODUCTION PROBLEM IS SOLVED. Packaging tomatoes in acetate film led to production difficulties for American Stores Company of Philadelphia. Following installation of lonotrons on the two wrapping machines, the company reports that the static problems were completely solved.

IONOTRONS

end static problems on packaging machinery

your production troubles in handling acetate, cellohane, glassine, paper, fabric or other material are due static, the chances are that Ionotron Static Eliminaors. Will solve your problems. This entirely new and ifferent eliminator reduces the probability of envelpes, bags and wrappers sticking to machinery or to ach other. Jogging is more uniform and delivery is approved.

HOW THE IONOTRON WORKS — The Ionotron has no moving parts. It requires no gas or electrical connections. There is no operating expense. It consists of a continuous source of alpha radiation, which ionizes the air and makes it a conductor of electricity. Static charges flow off harmlessly to ground through the ionized air. Only maintenance requirement is the occasional cleaning of the active surface with a soft cloth. The radioactive material in the Ionotron has a half-life of 1,600 years.

USERS REPORT EXCELLENT RESULTS — Already Ionotrons are ending static troubles on many printing presses and packaging machines.

Oneida Paper Products Company reports that Ionotrons give smoother machine operation and make it simpler to maintain high quality. Also, they have increased production.

Milprint, Inc., say that in making paper bags from high-static films, Ionotrons reduced static troubles to a minimum or eliminated them entirely. On gravure presses Ionotrons prevented static fires and hugging on the rollers. All static troubles on sheeters were eliminated by the Ionotrons.

If you're having production headaches due to static, send us full details of your problem, and our engineers will make specific recommendations. Or, mail the coupon for a descriptive bulletin.



*Dept. N-4, U. S. Radium Corporation, 535 Pearl Street, New York 7, N. Y. Please send Bulletin 8.1 on the Ionotron Static Eliminator to:

ADDRESS_____



STENCIL DUPLICATOR

MANUFACTURED ONLY BY THE MULTISTAMP CO., INC. NORFOLK, VIRGINIA

Does printing, marking, labeling, addressing jobs that no other duplicator can do! Prints anywhere, on practically any surface. No type to set—just type, write or draw on stencil, snap it on, and print! Every MULTISTAMP Outfit is guaranteed five years.

\$15

No. 3 MULTISTAMP OUTFIT.
Prints up to postcard size—
as many as 19 lines of type
5¼" wide. 40 to 60 clean,
sharp copies per minute.

F.O.B. Factory Complete Outfit

Established 1921 Reg. U. S. Pat Off.



DEALERS!
Sales are
soaring—
write for
profitable
Dealer Plan

Other MULTISTAMP outfits from \$7.50 to \$82.50. Write for illustrated folder.

The #3 Rocker-Type
Duplicator Prints on

SHIPPING TAGS LABELS POST CARDS CARTONS BOXES

LETTERS

OFFICE FORMS

Dozens of other uses!

APR

TRIANGLE BRINGS YOU COST-REDUCING... LABOR-SAVING...PACKAGING MACHINERY

For Weighing . . . Filling . . . Measuring . . . Sealing ALL DRY PRODUCTS

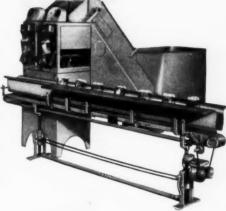
Equipment available for every need from small semiautomatic fillers to fully-automatic high speed "Elec-Tri-Line Systems" which package up to 120 PACKAGES PER MINUTE.

Elec-Tri-Pak Weighers

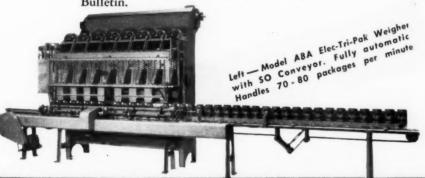
Packaging costs tumble down when the following features go to work for you: These machines weigh and fill all dry products into any style container at speeds of 12 to 15 packages per minute per section (1 to 8 sections) with precise accuracy. Automatic and semi-automatic models. Exclusive bulk and finish vibratory feed handles delicate products without breakage . . . changeover to different products and package sizes is

quick, easy . . . simple to operate, not requiring skilled labor . . . high output per labor hour and square foot of space ... models available to handle from 3/4 oz. to 5 lbs., all having acrometer weight adjustment for making fractional changes in amount during operation . . . extremely accurate weights . . . these machines are ready to multiply the productivity of your operators. Write for new Elec-Tri-Pak Bulletin.

Below - Model G2C Elec-Tri-pak Weigher with SO-3 candy. yeyor for potato chips, candy. veyor for potato cnips, canay, crackers. One operator 20 to 40 bags per minute



Above - Model A, onesection semi-automatic Elec-Tri-Pak Weigher. Sets pace for operator at ers pace for operator at 15 to 25 per minute.



See us at the PACKAGING **EXPOSITION** in Cleveland. April 26-30. Booth No. 506-507



One operator machine for filling everything from dental powder to grated cheese into any style container. Fills 30 to 60 packages per minute in sizes from 1 to 16 ozs. Automatic plunger assures positive discharge from measuring chambers. Write for bulletin.

U-1 Auger Packer (Right)

Packs powdered materials uniformly and tightly, allowing use of smaller, less expensive package. Fills and packs automatically after container is placed in position-20 to 30 packages per minute from 1 oz. to 5 lbs. Accurate . . . easy to operate and clean . . . quick change-over to other products. Write for bulletin.

> WEIGHERS . FILLERS CARTON SEALERS



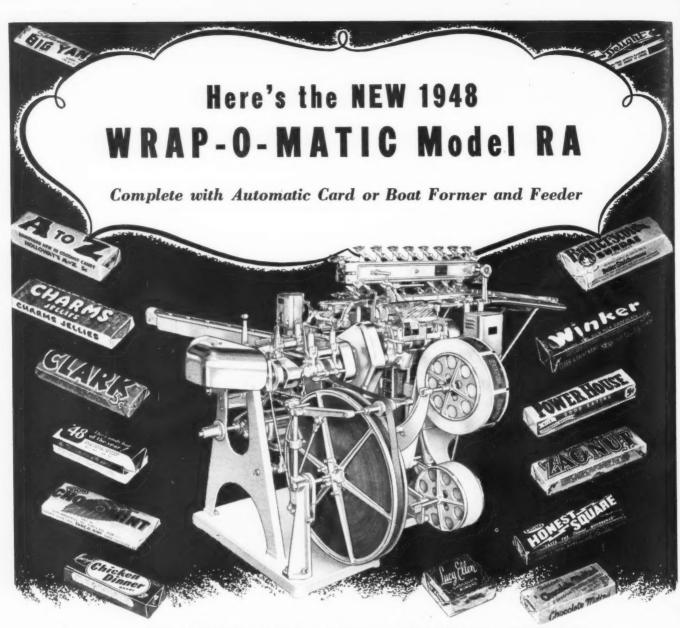
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SALES OFFICES IN NEW YORK, LOS ANGELES, MEMPHIS, JACKSONVILLE, V SAN FRANCISCO, PITTSBURGH, BRANCH FACTORY AT LOS ANGELES

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. . . FOR HIGHER SPEED, MORE ECONOMICAL WRAPPING OF CANDY BARS IN "DRESSED TO SELL" PACKAGES

The New 1948 Wrap-O-Matic Model RA is another big advancement in the automatic wrapping of fragile, regular or irregular shaped candy bars. The auto-

matic card former and feeder is now an integral part of the machine which makes for a more compact, more practical unit.

High speed, economical wrapping of neat, trim packages is an outstanding feature of Wrap-O-Matic . . . up to 120 units per minute with savings as high as 75% in wrapping labor and 35% in wrapping material. With a reasonable volume of production Wrap-O-Matics pay for themselves in an unbelievably short

period of time.

Take advantage of Wrap-O-Matic wrapping . . . reduce your wrapping costs . . . give your product that "Dressed to Sell" appearance. Send samples of your products and ask for illustrated literature.



SEE WRAP-O-

BOOTH 602-603-B

-LYNCH CORPORATION-

Package Machinery Division

TOLEDO 1, OHIO U.S.A.

US

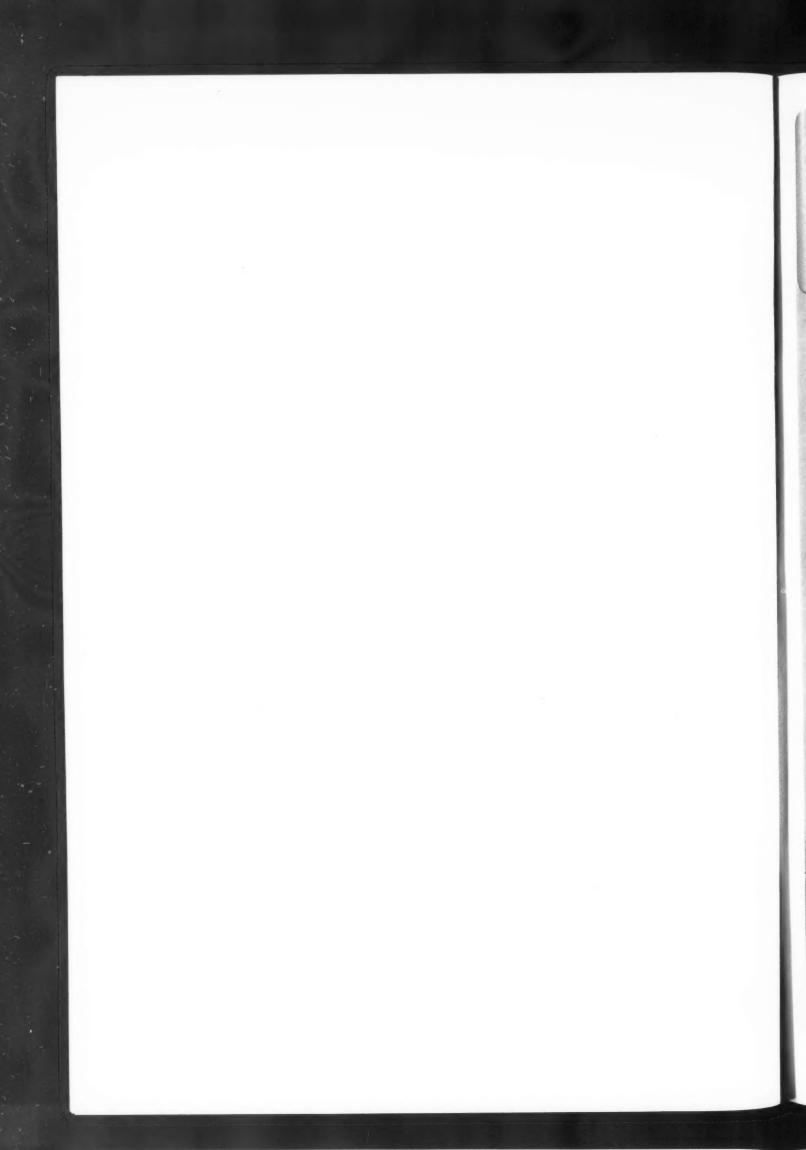
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Saint Louis to Cleveland

IS A SHORT DISTANCE . . . COMPARED WITH ALVEY

CONVEYOR MILEAGE IN THE PACKAGE GOODS INDUSTRIES.



See you in Cleveland!

you'll see ...



Motorized exhibit of Alvey Alveyors* at the A.M.A. Packaging Exposition Cleveland April 26-30. Booths 632-633.

THE PRODUCTS OF LEADING INDUS

EYORS the word for every conveyor need



CONVEYOR MANUFACTURING CO., 3205 SOUTH BROADWAY, ST. LOUIS 18, MO.

ADDED PACKAGE PROFITS from Package <u>Versatility</u>



GREAT DISPLAY VALUE

A fashion box for a fashion product reflects quality — a sure-fire combination to increase sales.



PERFECT PRODUCT PROTECTION

Nestled in its interior support, the product is fixed in perfect safety ready for open box-display.



TAKE HOME VALUE

Extra strength, style and sales-appeal give set-up boxes added "take-home" value.



Your product can be perfectly packaged by combining the versatile features of the set-up box with no extra cost. Obtain greater product sales — greater profits — from your products' package. See your nearest set-up box manufacturer today.

FOR INFORMATION OR SERVICE . CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER





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AND COOPERATING SUPPLIERS

Liberty Trust Building Philadelphia 7, Penn.



In an era of technical accomplishment, the Spectrum Electronic Corner Stayer affords an advanced application of electronics to the manufacture of thermo-plastic containers. Through the use of radio frequency heat induced in the plastic itself, this equipment produces permanent, absolutely straight seams—without using cement. But all this heat is internal—machine and product remain cool. It's fast, too—.010 inch material can be sealed in less than half a second. Your production is facilitated through increased speed, reduced spoilage, flexibility and reduced labor cost.

The Spectrum Electronic Corner Stayer is a single self-contained unit. It will handle any box seam up to 4 inches in depth and stock from .005" to .020" thickness: An ample 39"

high work table is provided with the electrodes mounted above it. The machine is operated by a foot pedal which causes the preformed box to be firmly clamped between the electrodes and automatically turns on the generator which supplies the radio frequency heat. The power drain is low—only 800 watts. The machine may be plugged into any convenient outlet—no special installation is necessary. It is also easily adjusted so that set-up time is kept to a minimum.

But rather than have us tell you all the features, see the Spectrum Electronic Corner Stayer yourself, as it is being used at the Eastman Kodak Company's booth at the Packaging Exposition.

REMEMBER . . .

it's Booth No. 111 at the American Management Association 17th Annual Packaging Exposition, Public Auditorium, Cleveland, Ohio. April 26-30.



MANUFACTURING COMPANY

540 North 63rd Street, Philadelphia 31, Pennsylvania

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BETTER PACKAGING MEANS BETTER PROTECTION SAYS MR. CELLOPHANE

SYLVANIA CELLOPHANE has the qualities so necessary for distinctive packaging. Every step in its manufacture is carefully checked. This careful control assures not only uniform transparency and a good printing surface, but also the high degree of dust, grease and water vapor protection . . . the low temperature durability and heat sealing qualities that make it outstanding in so many fields.



Wash cloth, bath and hand towels in U-board with extended flaps machinewrapped in cellophane adds up to an inexpensive, sanitary package that means more sales.

SYLVANIA CELLOPHANE

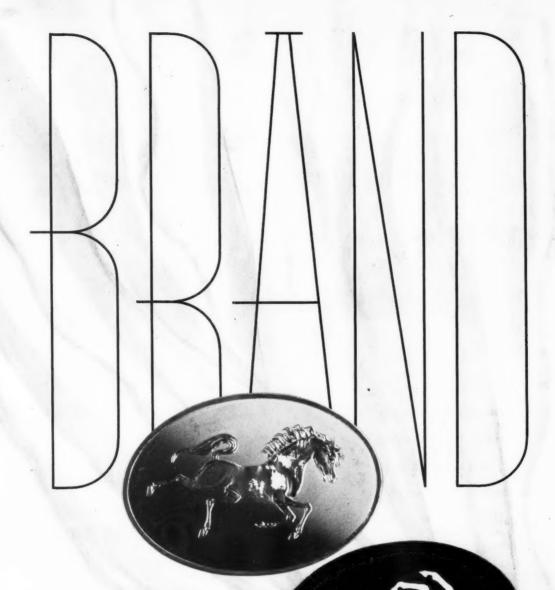
SYLVANIA DIVISION AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 350 Fifth Avenue, New York 1, N.Y.

Plant: Fredericksburg, Va.





Indelible Impressions

Does your brand leave an indelible impression upon your consumer?

It takes compelling labels, seals, tags and box wraps to give your product remembrance selling — though out of sight, your brand is ever in mind. For indelible impressions in indivisualized packaging, look to Cameo for ideas that are brand new.

Cameo Die and Label Company

creative designers-printers-quality packagings for 23 years

154 WEST 14th STREET

NEW YORK 11, N. Y.

WHEN IT COMES TO PACKAGING PAPERS FOR INDUSTRIAL REQUIREMENTS

RALTEX PROTEXAL

What's your industrial packaging problem?

If it's protection against water, moisture, grease, dirt, dust, etc., there's a Raltex product that you can use advantageously and economically.

Our technical staff has taken the bugs out of innumerable operations requiring the use of specialized industrial papers.

Remember, there's no substitute for the word experience and Ralston's 58 years of industrial paper know-how is ready to go to work for you.

- WATERPROOF CASE LINERS
- SEWN BARREL LINERS
- HANDMADE BAGS
- CAN BAGS
- WATERPROOF WRAPPERS
 - -BURLAP BACKED,
 REINFORCED OR DUPLEX



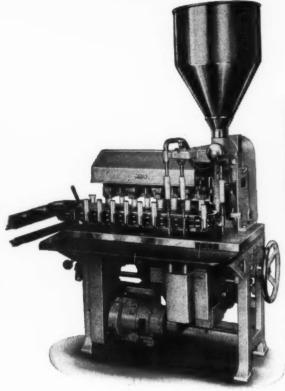
W. RALSTON & CO.

220 East 42nd Street

New York 17, N.Y.

Plant: Old Bridge, N. J.

PRECISION-BUILT MACHINERY · · ·



ARENCO TUBE FILLING MACHINE

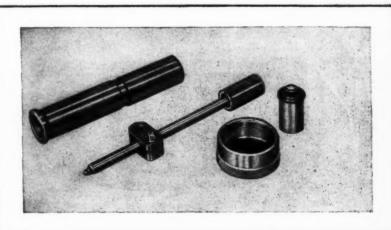
This machine fills, closes and seals collapsible tubes. It handles pastes, creams, lotions and liquids.

ARENCO MACHINES Peature

- 1. Automatic cap tightening.
- 2. Automatic tube cleaning before filling.
- 3. Positively correct quantity in each tube.
- 4. Clean filling—no spattering of inside closure wall—no material trapped in folds.
- 5. No tube, no fill—no material delivered from filling nozzle if tube is missing.
- 6. Ample passage for material—no valves or long tube connections. No squeezing to change consistency or viscosity of material.
- 7. Quick cleaning when changing from one material to another.
- 8. Quick changing from one tube to another.
- 9. All parts of machine easily accessible for control, lubrication, and cleaning.
- 10. Stainless steel or other non-corrosive metals are used in all parts contacting the materials.

ARENCO Saves Time

At the right are shown the only parts of the pump which have to be removed for cleaning or when changing from one material to another. Complete change from one tube size to another requires 25 minutes only.





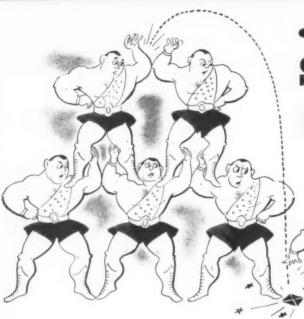
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THE ARENCO MACHINE COMPANY

INCORPORATED

25 WEST 43rd STREET . NEW YORK 18, N. Y.

TUPPER TUMBLERS



. . . P u t S P R I N G in your package

Drop 'em, step on 'em, knock them off a high shelf onto a concrete floor, Tupper Poly-T tumblers are unbreakable — won't crack or chip. Flexible, virtually indestructible, they withstand temperatures from 70° below freezing to near boiling. Tough—but beautiful—and colorful in soft opalescent blue, lemon, orange, lime, violet and white. And you know how housewives go for premium packages they can put to daily use in the home!

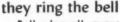
with TUPPER SEALS



sealed sampler

At last, a way to present food samples at their best. 2-ounce jigger is airtight, watertight with Tupper Seal.

The Tupper Seal is also a coaster for the table or for the desk lunch.



Bell-edge-all purpose tumblers come in 8-ounce size. Available with self-fastening, air- and liquidtight Tupper Seals. Ideal for children, because Poly-T won't break.



9-ounce highballs made with miraculous Poly-T are completely unaffected by alcohol. Come in all colors.



12½-ounce highball goes after profits in a big way. Feather-light, flexible, odorless, tasteless, non-toxic sanitary Poly-T.

5 ounces of versatility

Cheese, peanut butter, relish stay fresh, look better, taste better in these 5-ounce tumblers with self-fastening Tupper Seals.



TUPPER

got a packaging problem?

Tupper creates all kinds of packages for all kinds of purposes — with and without self-fastening alreight Tupper Seals.



Write for COLOR CATALOG C/O Dept. A

TUPPER CORPORATION, FARNUMSVILLE, MASSACHUSETTS - NEW YORK SHOWROOM, 225 FIFTH AVENUE

1948 TUPPER CORPORATION



- Manufacturers of high quality embossed seals, labels and embossed tags made to order for the customer.
- We will submit colored sketches achieved through the skill of our designers. There is no cost or obligation for this service.
- Additional samples produced by America's oldest embossed seal and label manufacturer will be sent to you upon request.









F. E. MASON & SONS
EMBOSSED SEALS and LABELS · EMBOSSED TAGS
BATAVIA · · · NEW YORK



Production up . . . costs down!

Four magic words, in any business! Let them come true, in *yours*, with a St. Regis Packaging System. That's the way many essential industries are packaging over 400 products.

A St. Regis Packaging System is made up of filling machines in various types and sizes and multiwall paper valve bags carrying up to 100 pounds. These husky bags are made of multiple layers of kraft paper with, in some instances, the addition of special laminated sheets. They are preclosed, save for their valve, which is automatically closed in the filling.

The whole operation is wonderfully fast and economical. It speeds up production and cuts costs in containers and manpower.

St. Regis also produces open mouth multiwall bags that are closed by wire-tying or sewing.

The St. Regis sales office near you is ready to talk over your packaging problems.

SALES SUBSIDIARY OF K ST. REGIS PAPER COMPANY

ST. REGIS SALES CORPORATION 230 PARK AVENUE • NEW YORK 17, N. Y.

NEW YORK 17: 230 Park Ave. • CHICAGO 1: 230 No. Michigan Ave. • BALTIMORE 2: 1925 O'Sullivan Bidg. SAN FRANCISCO 4: 1 Montgomery St. • ALLENTOWN, PA.: 842 Hamilton St. • OFFICES IN OTHER PRINCIPAL CITIES—IN CANADA: ST. REGIS PAPER CO. (CAN.) LTD., MONTREAL • HAMILTON • VANCOUVER

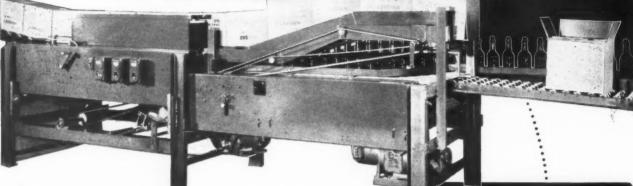


ABSOLUTELY NEW!

AUTOMATIC AND FULLY ADJUSTABLE



A-B-C CASE UNLOADER and UNSCRAMBLER



SPEEDS PRODUCTION...
CUTS COSTS...AUTOMATIC...
NO OPERATOR REQUIRED

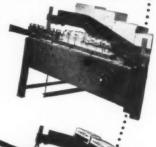
For those packers whose containers are received packed in re-shippable cases, the A-B-C Packaging Machine Corporation has designed a machine that automatically empties the case, unscrambles the empty glass containers and delivers them to the conveyor in single file, ready for filling. The empty cases can automatically be carried to the filling line for repacking.

FEATURES

- RELEASES UP TO 3 EMPLOYEES Automatic no operator required from the time your cases leave the warehouse or freight car until they reach the filling line.
- PAYS FOR ITSELF IN LESS THAN A YEAR At present wage levels the A-B-C Case Unloader and Unscrambler pays for itself in one year or less, even though the wage of only one employee is saved.
- REDUCES BREAKAGE The design and operation of the A-B-C Case Unloader and Unscrambler holds container breakage to a minimum.
- TESTED UNDER NORMAL PACKING CONDITIONS An A-B-C Case Unloader and Unscrambler has been tested for the past three years by one of the country's largest producers of bottled wines.
- THE ANSWER TO YOUR UNLOADING PROBLEM Each A-B-C Unloader and Unscrambler is readily adjustable to unload and unscramble all types of glass containers.

Write 7oday for new folder containing complete details. A-B-C Packaging Machine Corp., Dept. G-3, Moberly, Missouri.

HANDLES
GLASS CONTAINERS
OF ALL SIZES!



WIDE MOUTH JARS



HALF GALLONS



PACKAGING MACHINE CORP.

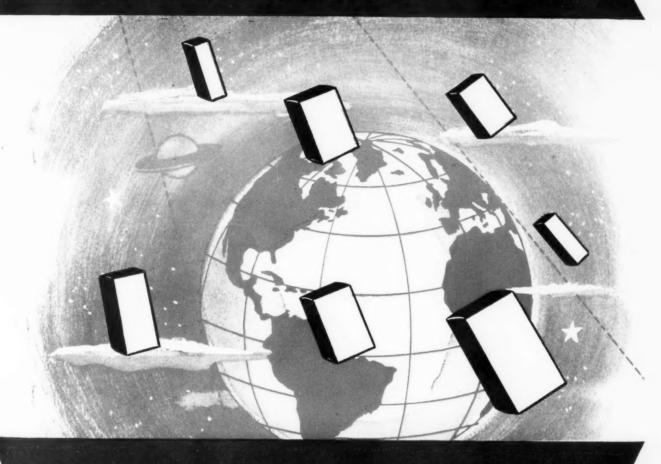
PRODUCTS

A-B-C Automatic Top and Bottom Case Sealer ● A-B-C Automatic Side Sealer ● A-B-C Semi-Automatic Bottom Sealer ● A-B-C Hand Gluer ● A-B-C Glass Container Case Packer



AMERICAN COATING MILLS

DIVISION OF OWENS-ILLINOIS GLASS COMPANY



WORLD'S LARGEST PRODUCER OF CLAY COATED FOLDING PRINTED CARTONS

SALES OFFICES: Elkhart, Ind. . Chicago . New York . St. Paul . Memphis . Grand Rapids . Evansville . Detroit

PLANTS, Elkhart . Chicago . Memphis . Grand Rapids

Like to make y



your filling machines

work 65 seconds a minute?

THERE'S A GOOD CHANCE YOU CAN — WITH GARDNER-RICHARDSON CARTONS THEY'RE PRECISION-ENGINEERED FOR EXTRA SPEED

Suppose you could get . . . in 60 seconds . . . the production you're <u>now</u> getting through your filling machines in 63, 64, or 65 seconds. Would that be worthwhile? Figure out what it would mean per hour, per day, per week.

Making high speed filling machines do more work per minute—through Precision-Engineering—is something we've been specializing in for a long time, here at Gardner-Richardson.

Some of the largest users of folding cartons in the country are well aware of this. They've seen what happened when Gardner-Richardson teamed up with their operating men to step up filling machine production. Sometimes, what looked like a trivial change has made a tremendous difference. In almost every case, Gardner-Richardson's Precision-Engineered uniformity has been an important factor in better performance.

We don't promise miracles. But give us an opportunity to study your specifications, your cartons and your operations. We believe we may be able to come up with recommendations that will have your filling machines "working more than the usual 60 seconds per minute." Ask for a Gardner-Richardson representative to call. It places you under no obligation.



in cartons of COATED LITHWITE!*

Coated Lithwite is the quality clay-coated board . . . PLUSI Made the modern way, with an exactingly level filmed-on coating. Whiter, Brighter, Holds up colors brilliantly, reproduces pictures with true-to-life realism. Folds, bends better, too. More receptive to adhesives. Rub-resisting, Fade-resisting. For a practical way to upgrade your cartons, investigate Coated Lithwite.

THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis

Reg. U.S. Pat. Off.



N - 30

P-45

Here's the short cut to smart packaging an artistically designed Swindell stock bottle plus your distinctive label.

Shown here are four of the many stock bottles available for quick delivery in popular sizes ranging from $\frac{1}{8}$ ounce to 16 ounces.

SWINDELL BROS., BALTIMORE, MD.

200 FIFTH AVENUE, NEW YORK
ROBERTO ORTIZ, HAVANA, CUBA

When you think of bottles think of

Swindell

C-39

L-33



NG



SHADES: RED . ORCHID . ORANGE

BLUE . FOLIAGE . PINK

WIDTHS: Number 5 . . . 7 8" wide Number 40 . . 27 8" wide

chandise. Another gift-wrapping "must" in TAFFEL'S history-making collection of quality ribbons.

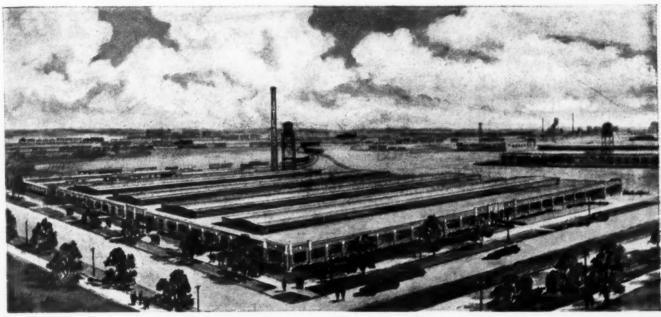
TAFFEL BROS., INC.

NEW YORK 16, N. Y.



Our New Modern Plant

... Designed for Better Service





Put Your Packaging Problems on Our Shoulders!

FOLDING CARTONS

SET-UP BOXES

CORRUGATED AND SOLID FIBRE

SHIPPING CONTAINERS

TELEPHONES

Chicago

PORtsmouth 3400

Long Distance

Summit 1600

Via La Grange, III.



ATLAS-BOXMAKERS, INC.

5025 WEST 65th STREET, CHICAGO 38, ILLINOIS

ING



Engineered with the same precise uniformity and brilliant design that characterize all Sun Tubes. That's why Sun Tubes are the choice of so many of America's most famous producers of fine drugs and cosmetics.

We solicit your inquiries and can assure prompt delivery. Call or write the Sun Tube main office, 181 Long Avenue, Hillside, N. J., or any of the representatives listed below.

Sun Tube Corporation

Hillside, New Jersey

CHICAGO 3, ILL., James L. Coffield, Jr., 105 West Adams St. LOS ANGELES 27, CALIF., R. G. F. Byington, 1260 North Western Ave.

ST. LOUIS 1, MO., M. P. Yates, Arcade Bldg. ST. PAUL 1, MINN., Alexander Seymour, 1411 Pioneer Bldg. CINCINNATI 8, OHIO, Ralph H. Auch, 3449 Custer Road



CHAMPLAIN
ROTOGRAVURE
DID THESE...

FASTER! BETTER! CHEAPER!



Clear, colorful, accurate work, produced speedily, economically, with extreme simplicity of operation, is the inherent advantage of rotogravure. Now, standard Champlain Rotogravure Presses bring you even greater speed...better work at even greater economy. They deliver rewound or sheeted—or, at your option, directly to standard Champlain units for slitting, punching, embossing, scoring, applying glue, or perforating in a continuous in-line operation! Here are the Champlain features that speed printing and tabrication on so many kinds of work:

- "SPEEDRY"...a fully enclosed ink fountain permits the use of highly volatile, fast-drying inks—a superior method of ink application exclusive with Champlain on presses for these types of work.
- LO-TEMP DRIERS ... dry ink at amazingly low temperatures, using a high velocity balanced air system.
- 360 DEGREE RUNNING REGISTER CONTROL... push button control corrects color register instantaneously. Or, automatic registration can be provided with Registron, Champlain's electric eye control for maintaining hairline register at high speeds.
- CONTROLLED IMPRESSION ... electric and hydrauliccontrol maintains uniform pressures high & low—to fractions of a pound.
- UNIQUE BREAKER ROLL DESIGN ... allows raising or lowering of impression roller without disturbing web tension or register.

Champlain Rotogravure Presses are already demonstrating their mechanical precision in the production of many nationally known wrappers and labels. They are suitable for many commercial printing jobs as well. Let Champlain Rotogravure Presses do *your* multi-color printing too... faster, better, cheaper.

CHAMPLAIN COMPANY, INC., 88 LLEWELLYN AVE., BLOOMFIELD, N. J.

CHICAGO OFFICE: 7 W. MADISON ST., CHICAGO 2, ILL.

B CHAMPLAIN
ROTOGRAVURE PRESSES
rotogravure at its bost

Speedry

On integravure presses up to 36' width the peterted Weige



Artist - Sydney Butchkes, native of Kentucky

 ${\sf KENTUCKY-annual\ purchases:\ \$11/3\ billion-mostly\ packaged.}$

CONTAINER CORPORATION OF AMERICA





this is one way to keep labels on...

...but STEIN HALL LIQUID ADHESIVES do it much more effectively!

Whatever your bottle labeling problems cold, wet, hot, greasy

or foil...

STEIN HALL'S complete line of Liquid Adhesives
assures you of the right answer.
Write for quotations, samples and consultation.

STEIN

285 Madison Avenue, New York 17, N. Y.

BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI • DETROIT LOS ANGELES • NEW ORLEANS • NEW YORK • PHILADELPHIA • PORTLAND, ORE. PROVIDENCE • ROCHESTER • ST. LOUIS • SAN FRANCISCO • TORONTO, CAN.

Don't forget the American Management Association PACKAGING EXPOSITION, April 26-30, Cleveland Auditorium.

Do you want to make a heat-resistant paper?

NO one today knows how really big the market for heat-resistant paper could really be. In the field of electrical insulation alone it could be tremendous.

This company will never make such a paper because paper-making isn't our business. But supplying the latices, mixes and technical experience that may provide heat resistance where it is wanted—is our business.

American Anode latices and mixes are widely used as coatings and impregnants, as adhesives in a wide variety of applications. Most of these uses are a direct result of work done by American Anode development men in our completely equipped development and research laboratory.

Latices and compounded mixes of GEON, HYCAR, neoprene, crude rubber, and GR-S are available. For more information about these modern materials and proper methods of using them, please write Department AC-2, American Anode Inc., 60 Cherry Street, Akron, Ohio.

AMERICAN ANODE

CRUDE AND AMERICAN RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

"A Thing of Beauty - A goy Forever"





The Finest Packages
Grow on Trees

Wood—the oldest packaging medium—still leads the field!

For no other medium can be fashioned with such beauty into such a never-ending variety of sizes and shapes. No other material

lends itself so readily to the eye-catching display of its contents.

And no other packaging material so favorably affects sales.

Wood cabinets are cherished forever . . . add

extra appeal to any product. There is no finer packaging

medium than wood . . . and no finer wood cabinets

than those made by Pilliod.







Shelf-Dwellers



The difference is



METALAM packages for Kodak developing powder; formed, filled and sealed, automatically.



Printed cellophane bread wrapt increase sales.



"Standard Size" cellophane bags save packaging costs for a wide variety of products.



Bags for gloves, hosiery or other goods allow inspection without damage.



Printed film adds sales impact at very low cost.



Flavor-holding packages for tea, coffee and similar products bring customer approval.

FASTER ACTION results from consumers and dealers when you wrap sales impact around your product, with Dobeckmun self-selling packages in processed films and foils.

You may need cellophane bags, printed or unprinted. Then select from our 260 "Standard Sizes". If it's a special custom-size, a liner or an overwrap, we'll dress it for faster selling.

For greater protection, we laminate films, foils and other materials into air-tight, moisture-tight, light-tight packages.

Whatever the package material, we add impelling sales impact by highest quality printing.

Our new, revolutionary Lithopaque process, gravure or letterpress reproduction gives your package irresistible attractiveness, makes it a self-seller instead of a shelf-dweller.

COMPARE SAMPLES OF DOBECKMUN PACKAGES

CELLOPHANE BAGS: 260 cost-saving "Standard Sizes"; also squares, flats, satchel bottoms; printed or unprinted; stock sizes of all types available for immediate delivery.

OVERWRAPS OR LINERS: Cellophane, polyethylene or other films; printed or unprinted; single thickness or laminated.

*METALAM: Laminated combinations of films and foils, for unit or bulk packages; moisture-tight, air-tight, light-tight. Especially desirable for chemicals, pharmaceuticals, deby-

or Self-Sellers?

PACKAGE IMPACT





CONSERVETTES, sealed with handy Debeckmun Heat Sealer, hold flower freshness.



inner liners of grease-proof, transparent TRITECT or polyethylene protect many products.





Printed overwraps for frozen foods vividly picture product quality.



Attractive bags make appealing gift wrappings for hosiery or other bo



Cellophane or acetate bags for prepackaged produce guard freshness and increase sales.

drated foods or juices and other "thirsty" products.

*TRITECT: Wax-laminated cellophane combinations; greaseproof, air-tight; dead folding; printed or unprinted.

PRINTED SHEETS OR ROLLS: Cellophane or other films; foils and laminated combinations; processed for use on package forming or wrapping machines.

*ZIP-TAPE: Laminated film combination for fast-opening packages; any desired color; adaptable to most modern packaging machines.

COMPARE: Send for samples and check Dobeckmun quality against the packages you are now using or considering.

Ask for practical, proved ideas that will add sales impact to your packaged products, make them move faster from dealer to user. The Dobeckmun Company, Cleveland 1, Ohio. West Coast Division, Berkeley 2, California



Inspect our display of self-selling packages in Booth 103, at the Packaging Show, Cleveland, April 26 to 30.

Self-selling packages in processed films and foils 4

Branches: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, Portland, San Francisco and Seattle. Representatives everywhere.

*Trade-mark

Peak of protection....



THE most effective seal is a vacuum seal. And Anchorvac N Caps provide a dependable vacuum seal . . . assure full protection against air, moisture and bacterial action. Delicate flavors and aromas are held intact—products are kept indefinitely in their most appetizing and salable condition. Anchorvac N Caps seal and protect all types of food products, whether packed hot or cold, sterilized or processed. They are supplied nested and wrapped for added protection and cleanliness. And, in addition, they provide effective reseal protection for unused contents.

GIBRALTAR

"The Rock" stands guard over the entrance to the Mediterranean. Truly it is a "Peak of Protection".



PRODUCTS OF ANCHOR HOCKING GLASS CORPORATION

It's Anchorvae N Caps

FOR THE PEAK OF PROTECTION

It's Class for consumer preference...

SURVEY after survey shows that consumers prefer products packed in glass. They prefer glass because it is transparent . . . permits them to see what they buy before they buy. They prefer glass because it protects . . . is clean and sanitary . . . imparts no foreign tastes, flavors or aromas to contents. They prefer glass because it is convenient . . . easy to open and reseal, permits safe storage of unused portions in the original container, affords a visual inventory. Why not pack your products in glass and take full advantage of this consumer preference?



PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION



AND IT'S Anchorglass
FOR MAXIMUM CONSUMER PREFERENCE



IN STORES all over the country shoppers are depending on their eyes for 85 per cent of their buying impressions. Alert merchandisers everywhere are inviting these shoppers with the kind of package that says, "You can see what you're getting."

Let us work with you in making visibility work most effectively for your product. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Div., Wilmington 98, Del. Du Pont Cellon

Du Pont Cellophane

shows what it protects protects what it shows . . . at low cost!



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

CLAREMONT

Versatile, Luxurious Sales-appealing Flock

Flocked Packaging ...The Plus that Sells!

Flocked by Gilt-Edge, Inc

15 West 24th Street New York 10, N. Y. Effects for Product Package and Display Creations

A Claremont-Flocked Finish with the look and feel of custom fabrics . . . soft as velvet—radiates feminine charm and sales appeal. Distinctive leather-like suede or felt finish attracts masculine choice. All are colorful, expressively exquisite, durable, tough, seamless surfaces that wear like iron. Design ingenuity, alone, limits their range of sales-stirring effects and textures. Complete details, color cards, samples and names of dependable service sources available upon request.

Inquiries
Invited!

Here, completely flocked perfume bottle dias and nesting sleeve-top add their appeal to a quality offering. Claremont Flock can be quickly, easily and inexpensively applied to any rigid or flexible material—and with no need to set up a department for its use. Qualified service sources attend your requirements!

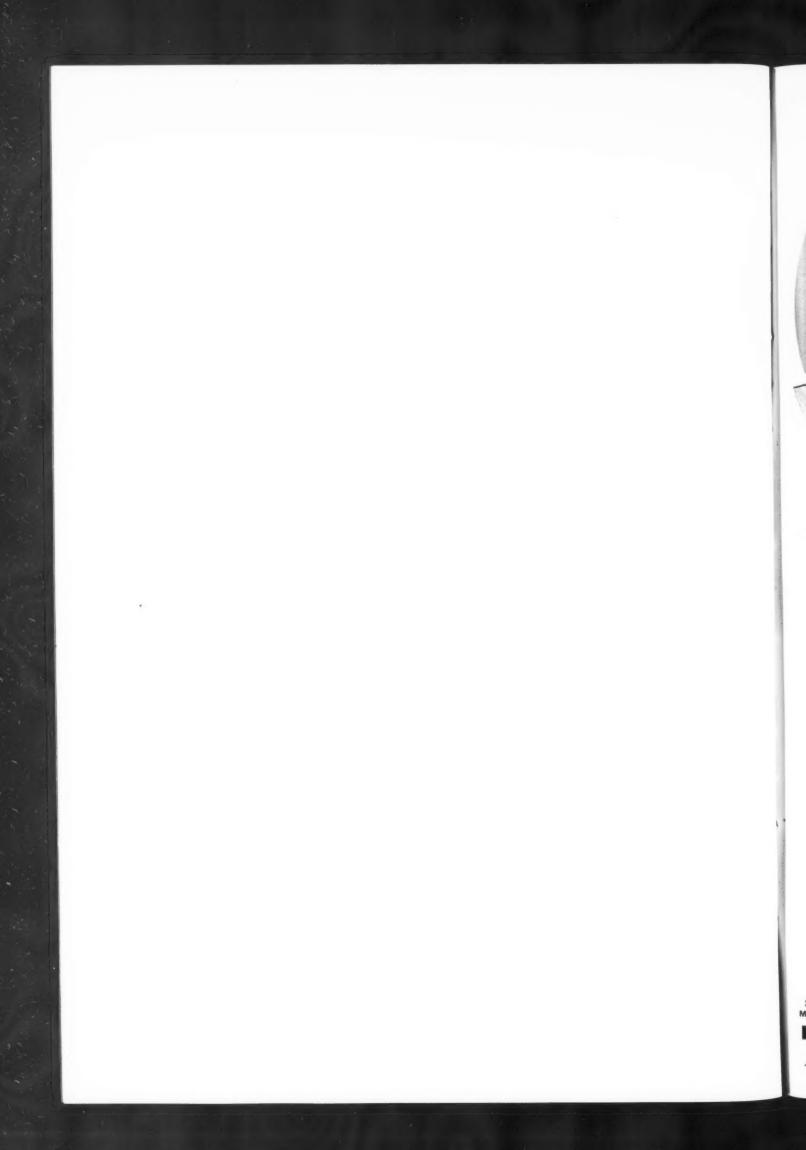
Ammunition for the Imagination!

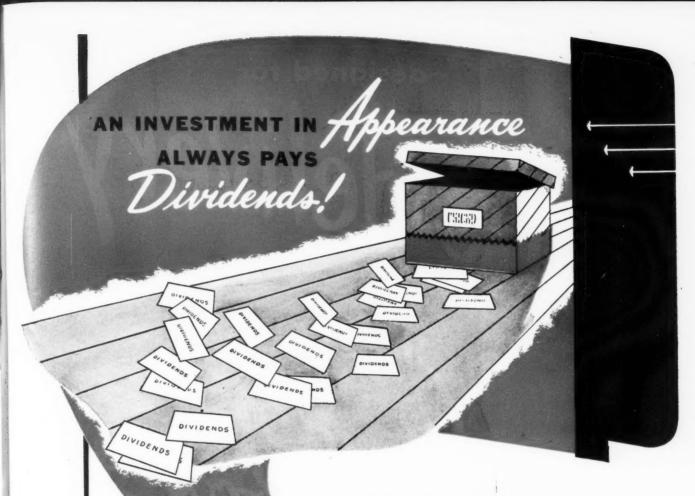
CLAREMONT WASTE MANUFACTURING COMPANY

> CLAREMONT N. H.

IVING

GING





Dress Up Your Package with-

First impressions linger longer . . . and when it's a sales impression you want to make, then Sparkling ALUMINUM FOIL is the logical answer. Yes—eye appeal is foil's exclusive virtue. But in addition there are many other desirable features inherent in ALUMINUM FOIL . . . it's moisture proof . . . grease proof . . . light proof.

As Foil Rollers, we serve practically all converters and are also fully conversant with the many producers of finished foil packaging. Therefore, if you have a packaging problem we would welcome the opportunity of recommending the leading package concerns best qualified to do your job. We invite your inquiries, no obligation is entailed.



COCHRAN FOIL COMPANY, INC., LOUISVILLE 10, KENTUCKY

3318 East Lake St. Minneapolis 6, Minn.

632 Fisher Building Detroit 2, Michigan Sales Offices
Gothic Suite • 527 Lexington Ave.
New York 17, New York

238 West Wisconsin Ave. Milwaukee 3, Wisconsin 214 Hippodrome Bld. Cleveland 15. Ohlo -designed for

Gafe delivery

Jay Boxes

Corrugated and Solid Fibre Boxes

Folding Cartons

Kraft Grocery Bags and Sacks

Kraft Paper and Specialties

GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

New York • Chicago • San Francisco
Atlanta • New Orleans • Jersey City
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San Antonio • Memphis • Kansas City
Bogalusa • Milwaukee • Chattanooga
Weslaco • New Haven • Appleton
Hickory • Greensboro • Sumter • Jackson

Always made of the finest materials available, Gaylord Boxes do a better job of delivering your product in perfect condition.

Call the nearest Gaylord Office

an Open Letter To a Packaging Man Whose Product is "Going Places"





MOLDED PRODUCTS DIVISION

YOU CAN MAKE SURE IT GETS THERE SAFELY AND GIVE IT A "TAKE ME HOME LOOK" WITH A MOLDED PULP PACKAGE.

Versatile is the word for molded pulp. It lends articles. Our company entered the molded pulp. It lends ing field after successfully adapting it for the manupackage, too.

It's an economy

Note the sprightly group of molded pulp containers on this page. They were created for us by George Sakier, strong, resilient, well-balanced. Colorful and clight, move yours.

Mote the sprightly group of molded pulp containers they strong, resilient, well-balanced for us by George Sakier, appealing, they make merchandise flights. They yours.

Perhaps your requirements call for a custom designed tract or protect, molded pulp fitts your packaging to attorion-except to yourself.

GET ACQUAINTED WITH THESE GAY FIGURES

They're packages of personality—and profit. Customers like them. All have ample openings and are easy to fill and seal. Especially suitable for candy, nuts, small toys, hosiery, handkerchiefs, gloves, novelty jewelry, cosmetics. Furnished in a wide range of colors.

Sincerely yours,

MOLDED PULP DIVISION ANIMAL TRAP COMPANY OF AMERICA

J. T. Boone, Sales Manager



NG





Tell Santa Claus What You Want — Fill in This Coupon Now

| Molded | Products Division | |
|------------|-------------------|---------|
| Animal | Trap Company of | America |
| Lititz, Po | ennsylvania | |

| I | want | more | information | about | figures | shown |
|---|------|------|-------------|-------|---------|-------|

| Give | me | complete | details | about | | |
|------|----|----------|---------|-------|-----|---|
| | | - Prese | | | 191 | p |

Please have packaging consultant call to discuss special design.

Your Name_

State

Introducing Plastafol*

The New ALL-TRANSPARENT FOLDING CARTON

A window-clear plastic box at a new low cost,

Ships flat . . . folds into shape in fractions of a second.

Available in large runs . . . tuck-end or glue-end.

Your message printed in permanent, scratch-proof color.

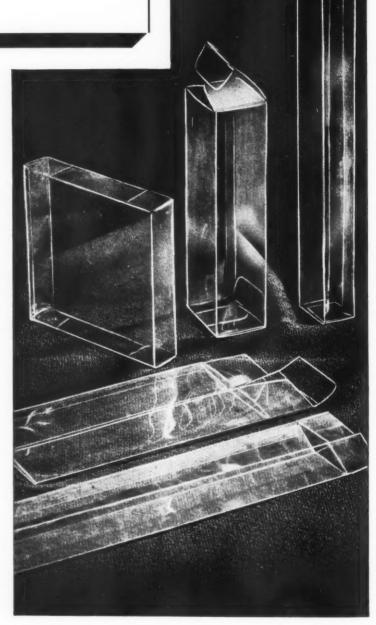
Now you can give your product all the extra sales appeal of individual packaging in transparent plastic cartons—at new low cost.

The new 100% transparent PLASTAFOL carton costs less per unit because it's mass produced by a patented process.

Folded flat for shipment, the PLASTAFOL carton saves freight—can be set up fast, by machine or by hand, with big savings in labor charges.

For very slight additional cost, we print your message on PLASTAFOL cartons in colors guaranteed not to scratch, rub or wash off.

Don't miss this new merchandising opportunity. Write today for information. We welcome comparison.



* Trademark

TROTH · BRIGHT · PAGE

Main Office and Plant: Paoli, Pennsylvania Sales Office: Land Title Building, Philadelphia

The PLASTAFOL carton is protected by present and pending patents.

Charmers/

On the Champs-Elysees... Fifth Avenue... Wilshire Boulevard... Rowell adds exciting charm to cosmetic boxes for face and dusting powder.

Sleek, gay, and attractive, they catch the feminine eye and find their way into the tailleur of the most sophisticated.







ion plor ing pharmaceutical hoves



50 years' experience

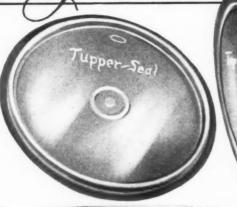
E.N. Rowell Co.Inc.

Manufacturers of Fine Paper Boxes

BATAVIA, N.Y.

TOPS for Your PRODUCT...









are TUPPER SEALS

THEY'RE TOUGH!

Rugged is the word for TUPPER SEALS. For all their good looks they're unbreakable and tough as rhinoceros hide. They protect your product in shipment and storage—right up to the moment your customer opens the package.



THEY'RE POLY-T

Poly-T, Material of the Future, is featherweight and flexible—tasteless, odorless, non-toxic. Poly-T is sanitary, easily cleaned. Poly-T can't break or chip, crack or peel.

THEY'RE VERSATILE!

TUPPER SEALS top everything—the practical, low-cost closure for any manufacturer with a package that must be sealed. We design and custom-manufacture TUPPER SEALS, along with an entire line of top-flight containers, to suit your individual need.



PACKAGE THAT IS THE PREMIUM

TUPPER CORPORATION manufactures a complete line of cocktail items—Paddles, Spoons, Forks, Spears, Muddlers, Sandwich and Food Picks, Place Card Holders, Neat give-aways, every one, to boost good will for your product or concern!



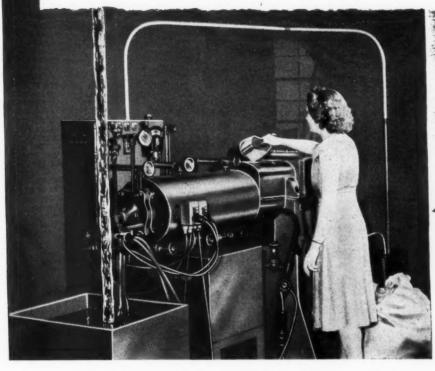
▶ Wonder Bowls . . . Vacu-Mixers . . . Cigarette Cases —the entire broad line of Tupper Products has high re-use value. You get a package—and an effective desirable premium as well.

Tupper creates all kinds of containers, with or without the famous self-fastening, air- and-liquid-tight Tupper Seal—custom-manufactured to your order. 5½", 6¼" and 7" Seals on hand now for immediate delivery. Write today for catalogue and complete details.

TUPPER CORPORATION, FARNUMSVILLE, MASSACHUSETTS . NEW YORK SHOWROOM, 225 FIFTH AVENUE

C 1947 TUPPER CORPORATION

Show windows for the World's Fastest Selling MARBLES



Continuous production of thin-wall tubing from a NRM extruder in the Vitro-Agate Plant, Parkersburg, West Va. Requiring a minimum of labor, production is fast, practical and economical.

• Everyone likes to see what they are buying. Youngsters buying marbles are no exception.

In deciding to use transparent plastic containers for their products, Vitro-Agate Company, Parkersburg, W. Va., needed a thin wall material in tubular form, in big volume quickly, to meet their requirements of as many as 60,000 bags a day.

As the world's largest producers of marbles, Vitro-Agate products are shipped around the world. Because of this and the many "handlings" the marbles receive, the package, an extruded polyethylene tube, .002 wall thickness, had to be strong, flexible and durable.

A single 2½" NRM extruder is meeting daily production needs. Vitro-Agate will tell you the extrusion is held to close tolerance and uniform appearance... there's no wasted material because the bag sections are cut and flame-sealed in a dual automatic operation. This successful use of NRM Extrusion Equipment should suggest to many, many other producers of a wide variety of products, a means to better packaging at lowered costs.

HERE'S A SUGGESTION: While in Cleveland for the Packaging Exposition, get in touch with us at nearby Akron. Plan to see and discuss the newest developments in extrusions as applied to packaging problems.



NATIONAL RUBBER MACHINERY CO.

General Offices: AKRON 8, OHIO

California Responsibility of Sam Klub, P. O. Box 441, Passadena 18, Calif.

Plastics MACHINERY DIVISION

EXPORT DISTRIBUTORS: OMNI PRODUCTS CORPORATION, 460 FOURTH AVE., NEW YORK 16, N. Y.

NG

Oscar Legas



Sharpens itself while running • Turns waste paper into resilient paper wool packing . Ideal for disposal of secret and confidential documents • Will not clog or jam • Easily operated by unskilled labour . Output up to one ton per day . Clean new paper produces excellent food packing.

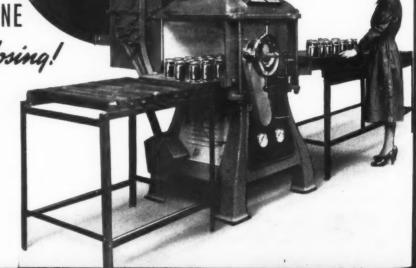
eeereeeeeeee throughout Oscar Leggio HIGH SPEED VACUUM MACHINE Speeds up Container closing!



Seals Tins, Jars and Bottles by mechanical closure whilst under vacuum.

Output per minute:-300 one pound jam jars 1,000 one ounce tobacco tins.

Easy to operate • Entirely automatic • All controls and gauges on front panel . Vacuum or Inert Gas • Also operates with soldering iron for tins which require soldering.



ingey & Co

GOSWELL TERRACE · GOSWELL ROAD · LONDON E.C.1

Inviting!

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one

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Editio ntleys

LAN

OOL REFRESHING mint flavor is the key to sales appeal in Clark's Tendermint Chewing Gum. Its display carton has the double responsibility of carrying 20 packs to a retail counter and then inviting every passing customer to enjoy that cool mint flavor.

Thanks to the clear smooth whiteness of Ohio Britone's fine clay-coated printing surface you can almost catch the scent of crisp fresh mint leaves from a glance at a Tendermint carton. Fine multi-color process printing for brilliant competitive shelf or counter appeal is a natural result of the qualities developed in this new paperboard by The Ohio Boxboard Company.

It is another good example of what you can expect from our PLANNED PACKAGING - a fully coordinated service including research, development, design, testing, board manufacture, and conversion.



The Ohio Boxboard

TMANUTECTUTERS OF paper board, folding boxes, corrugated and fiber shipping containers, and converted specialities

SALES OFFICES: RITTMAN • AKRON • CUYAHOGA FALLS • TOLEDO • CLEVELAND • CINCINNATI

PITTSBURGH • NEW YORK • CHICAGO

"So you think you're doing a good packaging job!"

1. That's what our sales manager says when he starts giving me the riot act—about how some of our cartons arrived busted open, and how it nearly cost him a good customer. When he finally stops for breath, I take over—





2. "Listen, Big Shot. You're not tellin' me about shipping problems — I've been living with 'em for years. All shippers have the same headaches. But not us — not any more, at least. Look here — "



3. "See that wall chart? I call it our diploma. We got it last week from a supplier who came in and showed us a sound slide film — all about how to seal things RIGHT with gummed tape. It sure taught us plenty — "



4. "Get a load of this! That's how packages should be sealed. Neat, strong, dust-tight, moisture resistant. And here's one for that customer of yours that nearly got away. He'll have no complaints when he gets this one!"



5. By this time, Big Shot begins to calm down. "Okay," he says. "I'm convinced. You keep on doing this kind of a job and we won't have any more trouble." Then he hands me a two-bit cigar — and we've been good pals ever since.



YOUR
SHIPPING ROOM PERSONNEL
SHOULD SEE THIS FILM!

It was made for you — to be shown in your place of business, at your convenience — free of charge, and with no obligation. For complete information, simply write to the Gummed Industries Association, Inc., 19 W. 44th St., New York 18, N. Y.

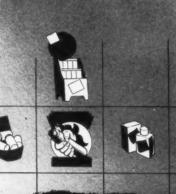


SEAL IT RIGHT

WITH CUMMED TAPE

THE GUMMED INDUSTRIES ASSOCIATION, INC. 19 West 44th Street, New York 18, New York

TOOLS FOR SELLING



Consolidated Lithographing Corporation

Cordially invites you to visit

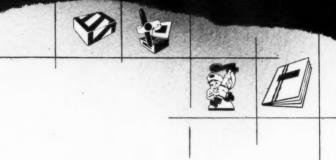
its exhibit at the

PACKAGING EXPOSITION

IN CLEVELAND, APRIL 26-30, 1948

BOOTH NO. 301-8

SEEING IS BELIEVING!



WE WELCOME the opportunity to show you how a unique merchandising approach to current marketing problems can increase the demand for your product at the point of sale.

WHILE WE SPECIALIZE in creating and producing these tools for selling:

Window Displays

Box Wraps

Booklets

Counter Displays

Product Wraps

Packaging

Labels

Cigar Labels and Bands

Posters

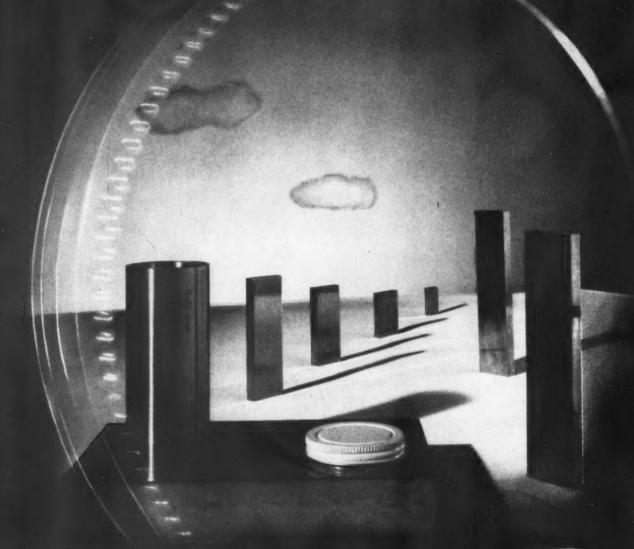
—the quality of our lithography speaks for itself, as you will see when you visit us at the Packaging Exposition.

CONSOLIDATED Lithographing Corporation

1013 GRAND STREET, BROOKLYN 6, NEW YORK

VG

SCIENCE...GUARDIAN OF QUALITY*



BERNARDIN Metal Closures

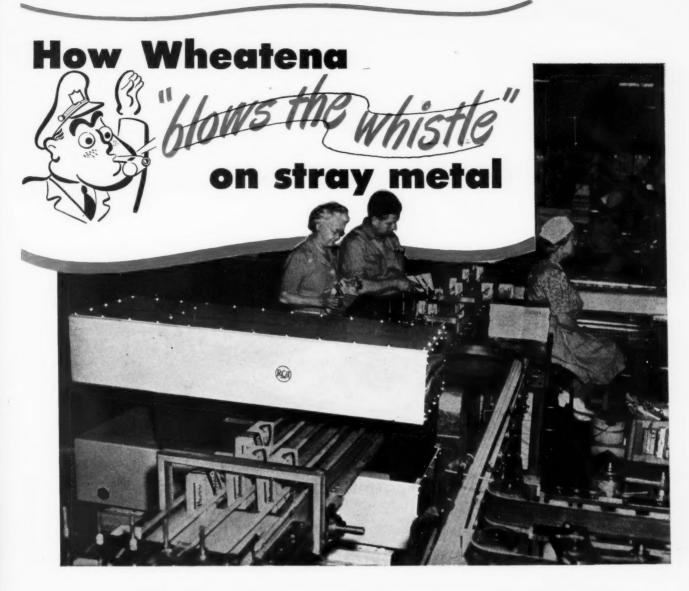
... A never ending effort to safeguard quality through use of modern developments of science.

... A never changing desire to lend industry a helping hand in solving its closure problems.

...Is it strange that a distinguished and growing clientele uses millions of our closures each year? Bernardin Bottle Cap Company, Evansville, Ind.

*Pictured—Gage Blocks, accurate to a millionth of an inch, supply the basic measuring precision back of Bernardin craftsmanship.

Since 1881—America's First Manufacturer of Metal Closures



The RCA Electronic Metal Detector automatically safeguards the total output of four packaging machines

 Here's an "electronic watchdog" that protects the purity and good name of your company's products.

It is the latest precaution taken by The Wheatena Corporation, at its Rahway, N. J. plant, to assure 100 per cent protection to its customers. By supplementing sieves, magnets, and visual inspection methods, it virtually eliminates the last element of chance from product inspection.

High-frequency radio waves search through each package. If metal happens to be present, the Metal Detector can either stop the conveyor, sound an alarm, or automatically remove the package in question.

Spots any kind of metal, even non-magnetic . . . Particles large or extremely small, metal or alloy—iron . . . lead . . . copper . . . brass aluminum . . . stainless steel, etc.—are all detected by this modern electronic equipment. Sensitivity can be adjusted to fit your particular needs.

Detects particles even if deeply embedded . . . Reaction is completely independent of depth to which a particle may be buried. Hence, you can use the

RCA Electronic Metal Detector on any kind of non-metallic product...during the raw-material stage, following processing, or after packaging.

You get constant and unvarying inspection efficiency at all times... preserve the good will of your customers... protect yourself against false claims of negligence... reduce the possibility of costly damage to expensive processing machines. There are cases where this equipment even paid for itself the very first day of operation. Be sure to get your descriptive leaflet. Write Dept. 96-D.



INDUSTRIAL ELECTRONICS

RADIO CORPORATION OF AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

THERE MUST BE A REASON

WHY MORRIS PAPER BOXES

CARRY AMERICA'S MOST FAMOUS PRODUCTS

DISPLAY

FOLDING CARTONS

BOTTLE

CRACKER CADDIES BOXES

FRAME-VUE BOXES FOR BULK ICE CREAM

The proof of the box is in the user...and the superiority of Morris

Paper Boxes is demonstrated by the great names they carry. Let the designing and manufacturing genius of this company work

for you, whatever your box problem may be . . . for

we create boxes to fit any product best!

MORRIS PAPER MILLS

135 SOUTH LA SALLE STREET . CHICAGO 3, ILLINOIS

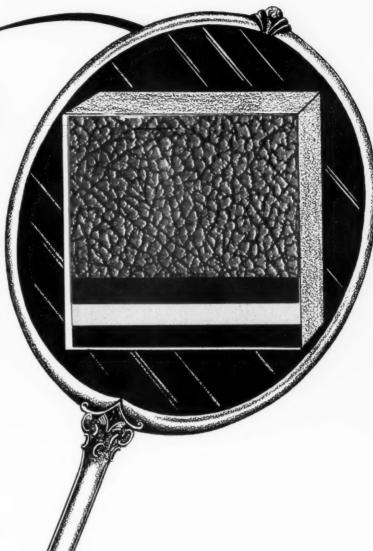
REFLECTIONS OF VALUE

For Your Product

The true quality of your merchandise is mirrored in its package.

You can emphasize and enhance the appeal of your product by clothing its container in a Middlesex box paper. These attractive, decorative papers create a favorable impression of your product, heralding its quality, its style—before the package is opened.

Specify Middlesex—the paper that makes selling easier.



Samples of our newest papers, featuring beautiful colors and attractive designs, are available at our nearest office. Write for them today.

Middlesex Products Corporation

Incorporated 1866

Mill and Home Office: 111 Putman Avenue Cambridge 39, Mass. Branch Sales Offices:

401 N. Broad Street Philadelphia 8, Pa. 308 W. Washington St., Chicago 6, Ill.



Finest for use...finest for re-use!

Here's a rugged steel container that will deliver the goods safely! It's brimful of uses—for solids, semisolids, liquids, or dry bulk. Comes in both light and heavy-gauge, large or small sizes to meet your needs.

Consumers of your products rate these containers sky-high because of their long and diversified re-use value. Don't forget this extra sales point. Contact our nearest sales office for specific details.



CONTINENTAL CAN COMPANY

100 East 42nd Street, New York 17, N. Y.

that help solve Packaging Problems

Packaging in cartons, wrappers, boxes, bags, cans and tubes presents a variety of problems, some of which may be solved by the selection of an ink especially suited to the purpose.

Among the special inks made by the ink companies comprising General Printing Ink Division may be mentioned the following, each of which is particularly adapted to some packaging technique.

FOOD CARTONS AND LABELS

Hydry is a moisture setting ink for the food field. It dries quickly, permitting uninterrupted processing with no storage time needed for drying. Contains no oils to oxidize, and has no residual odor.

CANS, TUBES AND METAL CONTAINERS

Hard-Tex metal decorating inks are available for lithographic application. Coatings and varnishes for metal protection supplement the decorating inks.

TEXTILE BAGS

For fabric bags used in shipping sugar, flour, cement, and other loose products, there are special textile inks. These can be made so that the printing may be washed out if bags are to be reused by consumers.

WOODEN BOXES AND CRATES

Special inks for printing on wooden boxes, crates and covers.

ROTOGRAVURE INKS

For long run printing of labels, wrappers and folding boxes, rotogravure inks are economical and satisfactory.

METALLIC FINISH INKS

Silversheen and Goldsheen produce effects simulating metal surfaces, such as aluminum, copper, bronze and silver.

NON-SCRATCH AND GLOSS INKS

Glostone and SUveneer are particularly suitable for labels, wrappers and cartons likely to be subject to considerable handling and wear

INK FOR PLASTIC FILMS

For containers and wrappers made from plastic films, including vinyl resin dispersions, polyethylene, polyvinyl butyral and cellulose acetate. Each of these presents a somewhat different printing problem The inks are highly adherent and non-blocking, not tacky after printing. Films may be rolled or packed without sticking. Produced by Warwick Chemical Division.

For detailed information regarding any of these inks, you may consult any branch office of the General Printing Ink Division, or write direct to Packaging Ink Department.

GENERAL PRINTING INK DIVISION

100 Sixth Avenue, New York 13, N. Y.

Geo. H. Morrill • Sigmund Ullman • Fuchs & Lang • Eagle Printing Ink • American Printing Ink
E. J. Kelly • General Printing Ink Corporation of Canada, Ltd., Toronto, Ont.



CHEMICAL

17 th AMA PACKAGING EXPOSITION

Visit us at
BOOTH
Nº 636
and
at the
STATLER
HOTEL

Jim Deeney Harold Bensing Adolph Mueller Max Lousin

WELCOME

CLEVELAND APRIL 26-30

BENSING BROTHERS & DEENEY
401 N. BROAD STREET • PHILADELPHIA, PA.

Wakefield, Mass.
81 Albion Street

Chicago 47, III. 2358 N. Seeley Ave.



the new Colgate Shave Stick is packaged in a modern version of a pioneer among plastics containers. Durez was selected for the body of the new package, as it was for the old. Colgate experience shows Durez matches good looks with equally fine performance. The rich lustre of this container will not dim or discolor with use. The phenolic material is waterproof and non-bleeding, resists the action of mild alkalis and acids. It can be screwed up tight without danger of stripping, always opens easily.

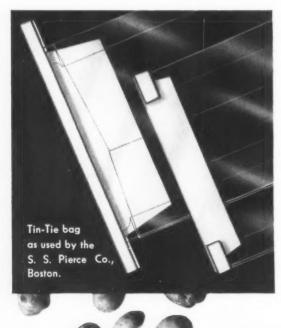
D'our business too may be benefitted by a talk with the Durez staff—men who have specialized in packaging with phenolics for many years. Write Durez Plastics & Chemicals, Inc., 294 Walck Road, North Tonawanda, N. Y.



PHENOLIC RESINS THAT FIT THE JOB

NG





Women are more apt to keep buying your product when you send it to market in a package that has no peeves.

One such package is Kellogg's Tin-Tie, a peeve-proof bag that can be opened and re-sealed again and again until the contents are used. Ideal for dried fruits and vegetables, raisins, nuts and candies, Tin-Tie bags make a product its own best salesman. Fabricated to order from clear, tough cellophane, they come in flat or expansion styles, either plain or printed in multi-colors.

If this significant use of Kellogg packaging knowledge interests you for your business; if you would like to know more about how Tin-Ties can trade your product up, write to

KELLOGG CONTAINER DIVISION

UNITED STATES ENVELOPE COMPANY . SPRINGFIELD 2, MASS



T an C na

 T_i

of

CONTAINER MANUFACTURER • PRINTING • CONVERTING • • Cellophane • Pliofilm • Glassine Foils • Vinyls • Polyethylene • Rigid and Flexible Acetate • Coated and Specialty Papers

FAST-SELLING HOME ITEM

1e

Eye Comfort
are assured by
mnIDED

RUE-VUE uses Plaskon Molded Color as the basis for such sales-promoting copy: "Stunning duo-tone combination . . . exquisite in design and finish . attractive . . . durable . . . a beautiful gift for all-year-round enjoyment."

The True-Vue Stereoscope and Library Case are excellent examples of the display and service features of Plaskon Molding Compounds. The custom-molded Library Case is rich in color and eye-catching in appearance. The molded-in TRUE-VUE name, burnished in gold, assures distinctive product identification.

The warm, friendly feel of Plaskon Molded Color invites handling and use of the Stereoscope, with snug, comfortable fitting when held to the eyes for viewing of the films.

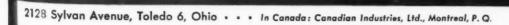
Thermosetting Plaskon Molding Compounds truly are modern peckaging and manufacturing materials. They can be transformed into any practical size or shape of finished product, in any color or combinations of colors desired, and at low production costs.

Write for free illustrated booklet giving complete details on Plaskon* ureaformaldehyde and melamine-formaldehyde molding compounds. *Reg. U. S. Pat. Off.



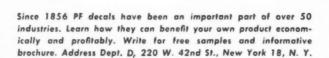
OLDED COLOR







From radios to roller-skates—from a silver-winged airliner high in the stratosphere to a dainty bottle of perfume on a frilly dressing table—PF decals go everywhere, sell all the time. They're in your office and they ride through city streets on buses, trucks, trolleys, company autos. PF decals go where no ads ever reach — and they're selling throughout their long life, in free space! PF decals pay for themselves, bring credit and recognition to your product. Show your own trademark with pride; make full use of its value! If it's out-dated, PF has full art services and will show you new designs without charge or obligation.



PALM, FECHTELER & CO.
NEW YORK • E. LIVERPOOL, OHIO • CHICAGO

COLLAPSIBLE METAL TUBES TIN TINCOATED MEANE ALUMINUM Mode vision of the capable management whose experience super and generalions HOUSEHOLD CAN SPOUTS
CY, NALEAN SPOUTS Pioneers in the fabrica.

TUBE COMPANY, INC.

500 LYONS AVE. IRVINGTON 11, N. J.

Telephone WAverly 3-6400

ART TUBES MAKE A GOOD PRODUCT LOOK BETTER

ls |-|e! |nd

lf /ill

n.

NG



NOW...

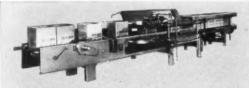
See PACKOMATIC' equipment in operation at the PACKAGING EXPOSITION, CLEVELAND AUDITORIUM, April 26-30. Booth 408.



-sealer

WHAT IT 15. Sealer has ball bearing rollers in both top and bottom sections; V-belt motor drive. Ball bearing swivel casters. Available in lengths from 6' to 26' to handle cases 6" x 5" x 4" to 30" x 18" x 19" WHAT IT DOES. Operator applies glue to flaps at roller feed table, closes them and starts cases between intermittently operated belts, controlled by automatic start-and-stop mechanism.

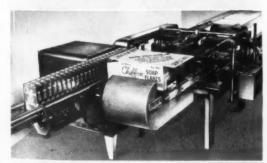
TYPICAL PACKOMATIC EQUIPMENT. PACKOMATIC builds a diversified line of shipping case gluers & sealers; carton formers, fillers & sealers; volumetric telescoping fillers; auger packer-weighers; net weight scales; case imprinters; special machinery.



PACKOMATIC automatic Model D shipping case gluersealer for paper shipping containers is applicable to practically any production requirement or plant layout. Readily adjustable for a wide variety of case weights, lengths, widths and heights.



PACKOMATIC's "Streamlined" Model D, a show-room unit. Ideal for food and dairy product manufacturers ... beverage firms.



PACKOMATIC's side gluer & sealer automatically glues and seals both ends of cases going through in horizontal position. Especially suited for handling endopen type, tall, narrow cases.

PACKOMATIC

shipping case gluer

semi-automatic gluer-compression sealer for low speed operations

Save time... save space... save labor... seal your paper shipping cases against the tough punishment modern handling methods inflict.

Learn about famed PACKOMATIC gluing and sealing equipment that sells as low as \$859.00 complete... that is designed and built for operations where many small runs are handled daily—or where volume does not justify the larger investment required for fully automatic equipment. Learn too, about the many PACKOMATIC automatic case gluers & sealers for handling low and high speed operations: side sealers, streamlined models, etc. J. L. Ferguson Company, Route 52 at Republic Ave., Joliet, Ill.

CONSULT PACKOMATIC OFFICE NEAREST YOU

PACKAGING MACHINERY TO M. REG. U.S. PAT. OFF

Chicago • New York • Boston • Philadelphia
Baltimore • Cleveland • Denver • New Orleans • Dallas
Los Angeles • Seattle • Portland • San Francisco • Tampa

PLACE ORDERS NOW for early delivery

J. L. Ferguson Co., Route 52 at Republic Ave., Joliet, III.

Please send full information on hand gluer and sealer for shipping cases ______ x _____, weighing ______ lbs., for production of approximately _____ cases per hour.

We are interested in automatic equipment.

Address

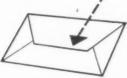
City_____State____

KNAPP-WRAPP Moto-Wrap PRESENTS...



HIGH SPEED LOW COST Available Now!

1948's Finest, Fastest, Slickest Semi-Automatic WRAPPING MACHINE



ENVELOPE-TYPE FOLD

This is the neat end-seal made by the MOTO-WRAP.

SPECIFICATIONS

Occupies floor space of 40" by 46" with frame height of 34". Supported by welded angle iron legs with 12" clearance from floor.

Geared head reduction motor supplies motive power.

Has convenient starting button instead of foot treadle.

Mechanism completely enclosed by steel panels.

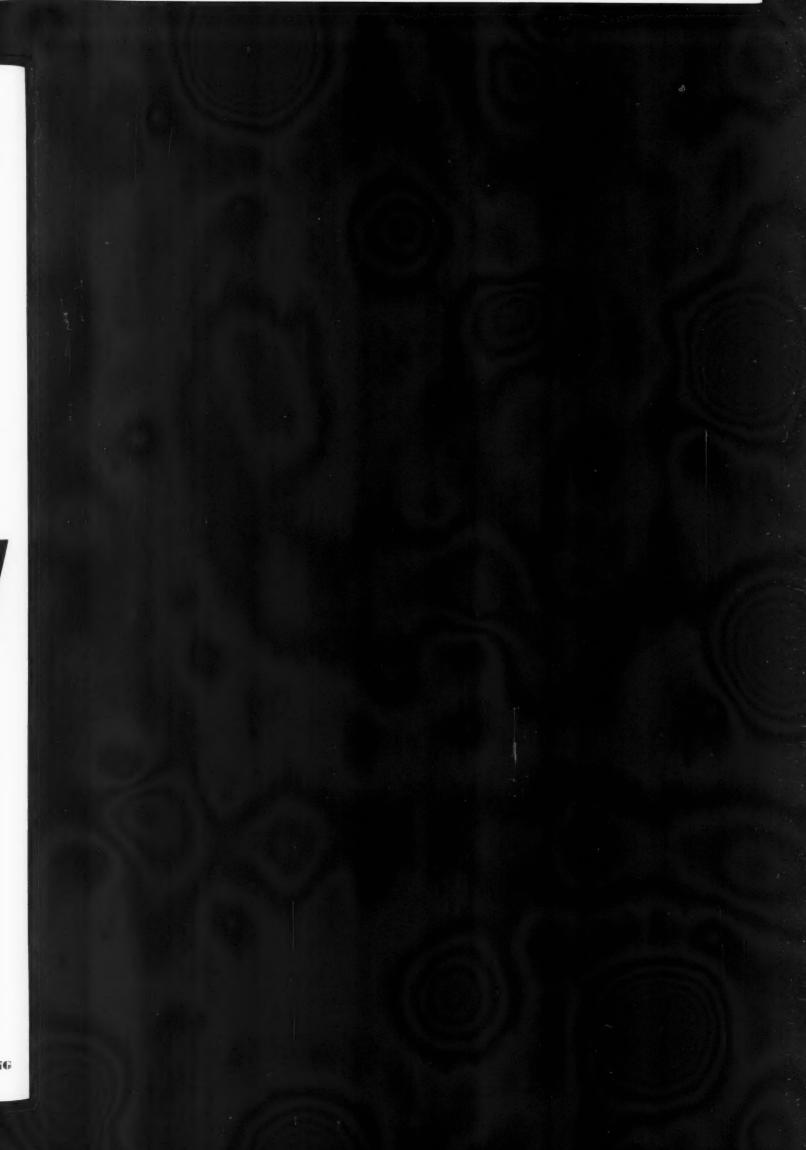
HERE'S the answer to the packaging industry's demand for a low cost, high speed, efficient, semi-automatic wrapping machine...one that produces slick, taut, neat wraps comparable with the costliest automatic machines. The Knapp MOTO-WRAP has everything! STREAMLINED DESIGN...easy to keep clean, easy to operate. AUTOMATIC SHEETER...cuts single sheets and presents them to operator on ideal pick-up surface. ECONOMY... uses rolls of wrapping material instead of costly sheets. ENVELOPE-TYPE FOLDS... neatest kind for packages. INTERCHANGEABLE HEADS...can accommodate various sized packages as follows: 4"-12" long; 2"-10" wide; 34"-3½" high. HIGH SPEEDS... up to 1200 an hour and yet requires less motions by operator. FEWER MOVING PARTS... a minimum of maintenance. And your finished product becomes a KNAPP TAILOR-MADE WRAP, there can be nothing finer. Act now! Write now for full details of this amazing achievement in packaging — the Knapp MOTO-WRAP!

Send sample of your product to:

NAPP-WRAPP

KNAPP MANUFACTURING COMPANY 2568 San Fernando Road, Los Angeles 41, Calif.

Don't just wrop -"KNAPP-WRAPP"







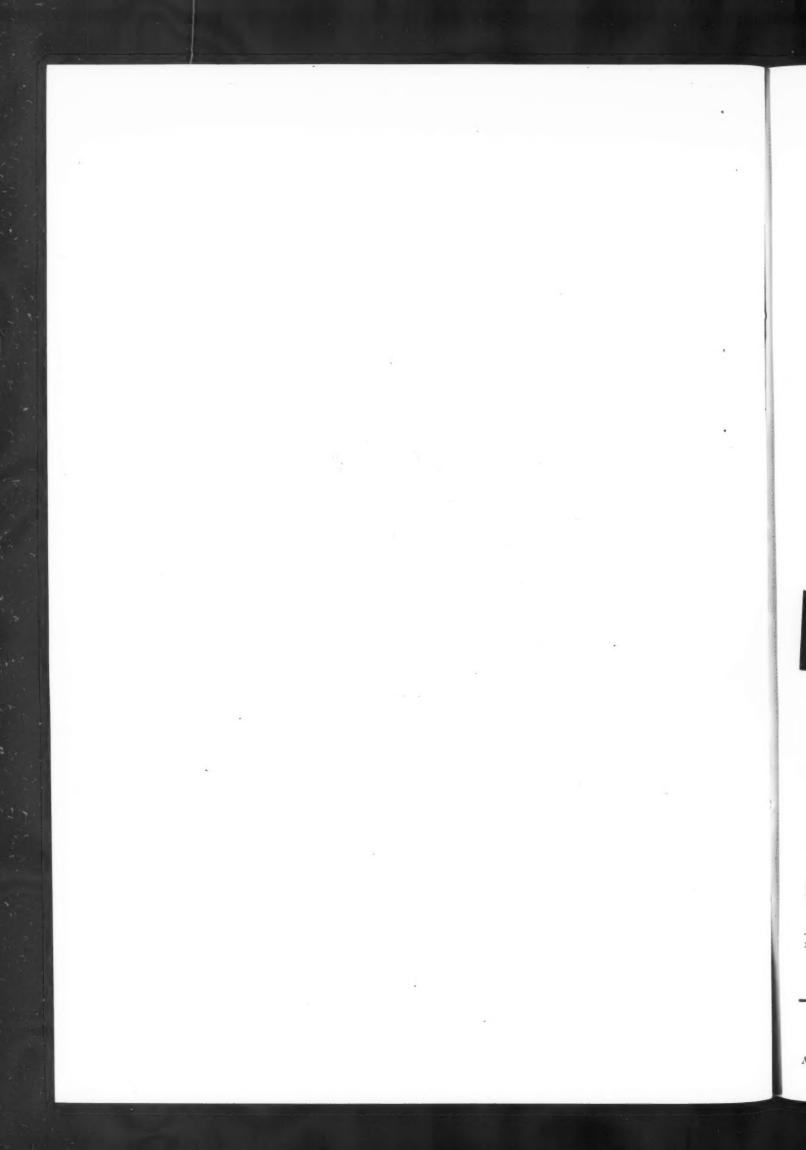


LARFIS . TAGS . DISPLAYS . BOX WRAPS

THE FOXON COMPANY

MAIN OFFICE AND PLANT . 235 W. PARK STREET, PROVIDENCE, R.I.
OFFICES IN ALL PRINCIPAL CITIES . EASTERN OFFICE 11 W. 42nd STREET NEW YORK
WESTERN OFFICE . 238 NORTH NORTON AVENUE, LOS ANGELES 4, CALIFORNIA







Fin furniture uart). She recalled that uight several jars. What it it? "Saves me work!" Everybody chuckled at se asked if that was what in that piano of hers that and shiny. It was. There of pencils as six of the urniture cream.

n, from the dental-plate
) to the E Z Shine Cloth
Mrs. Simpson went down
ne guests frequently helpshow the products worked.
hey turned in their order
5 impson didn't embarrass
uding out individual purne did announce that the
re \$47.12—a good, averhat would net her a \$12
uld deliver their purchases
alek's next Thursday.

Simpson asked who would a Stanley party; she was for October, but she had November. There was remember. "Such a nice, sociable way to shop," Mrs. Simpson pointed out. And so much better than door-to-door selling. She says she wouldn't have the nerve for that.

Point of purchase

THE Einson-Freeman Co., Inc., Lithographers, of Long Island City, New York, is very much aware that the success of an advertising campaign is often decided at the moment of purchase and that lack of a brand-name reminder can

ruin the best of them. The company specializes in producing lithographic store displays that range from simple posters to the most complicated animated cardboard attention getters. Einson-Freeman

last year manufactured \$5,700,000 worth of promotion material for some 500 advertisers. Its top fifteen accounts, which include Westinghouse, Admiral Radio, General Foods, Texas Co., Hiram Walker, averaged well over \$150,000 each, and although some general lithographers had a much larger total volume of business, Einson-Freeman was far and away the leader in the \$100-million display field.

As might be expected, the three principal owners are salesmen. Thirteen years handling 90 per cent of ement heavily. whose annual election converts pubs in Greater New York into polling places, with eight-color streamers ballyhooing the pretty candidates. There were almost 1,500,000 votes cast last year. To this campaign, brewer Liebmann gives much of the credit for a 400 per cent increase in his beer sales.

The company's still profitless pride are the animated displays. While other lithographers would not touch them, Einson-Freeman believes that motion will be important in future store adver-

tising, and they encourage new inventions in this field.

Neither the war nor the paper shortage impeded Einson-Freeman's growth. During the war Joe Leigh landed contracts for making cardboard

training aids for the armed forces, amounting to about 40 per cent of the company's volume. E-F made ingenious little things like a 3-cent pocket blinker on which sailors playfully learned the Morse code. When the war ended, new business more than offset the canceled war contracts and Einson-Freeman found itself seriously cramped for space. This year the owners are laying out \$500,000 of their own and the company's cash for new equipment and a down payment on the spacious Wright Aeronautical plant No. 3 near Paterson, New Jersey. There



Look.. a gift plug

the spring: was interested to see lek would choose as her gifts ostess, Mrs. Simpson showed ortment that included plated ucite mirror, a nylon haira cloverleaf mop. Mrs. Orsi to take the silver (Mrs. Orsi few more Stanley parties to e she completes a full twelve-. Mrs. Wyczalek agreed, and e forks, three knives, three sugar shell, and a butter knife. ras no question she deserved it. tra surprise she took everyone ining room for cake and coffee. pson told her she shouldn't have so much trouble. "They're my Mrs. Wyczalek replied, "and I do less for them." There was .l murmur of appreciation-it of the best parties anybody could

years to old Mr. Emerir

Almost immediately, the partners were vindicated in their belief that they had uncovered a sleeper, an area in which to offer advertisers the same aggressive support they were receiving in commissionable media from the agencies. One of the complications of the point-of-purchase field is that a display must not only please the advertiser but also the dealer, who would not otherwise put it up. This forces the enthusiastic owners of Einson-Freeman always to be on the lookout for new ideas. As a point-of-sales promotion normally just repeats the theme of the major advertising campaign, they are particularly gratified if occasionally "the tail wags the dog"-i.e., if one of their ideas is taken over for a whole campaign. Thus they conceived Miss Rheingold, in the teeth?

creasingly aware or point-of-purchase displays.

Maybe it isn't Emily Post to footnote FORTUNE, or cavil at a compliment... but N.B., please! Einson-Freeman is neither plush nor proud... gets its big volume from many advertisers... prefers to be the best display lithographer rather than biggest... is more concerned with problem than print order... invites business with a potent idea, not an inside price!

EINSON-FREEMAN CO., INC.

Look-in-the-teeth Lithographers
Starr & Borden Aves., Long Island City, N. Y.
... and branch offices too numerous to mention!



Here's how plastic containers—Celluplastic containers—increase sales: (1) by transparency, (2) by beauty of color, (transparent or opaque), (3) by beauty of design (produced in any design; any shape, long or short, round or square, etc.).

In addition, Celluplastic containers (1) cut transportation costs (1/5 weight of glass), (2) eliminate breakage (shatter-

proof), (3) conserve space (no bulky packing needed). Permanent label imprinted during manufacture. Seamless. Non-inflammable. Have consumer re-use value.

Celluplastic is the world's largest producer of plastic containers. Est. 1919. Expert engineering staff. Blueprints, samples, etc., submitted quickly. For sample containers, literature, write Celluplastic, 34, Avenue L, Newark 5, N. J.

PLASTIC VIALS, CAPSULES, BOXES AND SPECIAL CONTAINERS

ALSO CUSTOM EXTRUSION AND INJECTION MOLDING

Celluplastic Corporation

New York Office: 630 Fifth Ave., CIrcle 6-2425 Representative: C. Civita & Co., 2 W. 45th St., New York City Dygert & Stone, Inc., 36 St. Paul St., Rochester, N. Y. Allen-Nelson Co., 603 Boylston St., Boston J. E. McLaughlin, 401 Lock St., Cincinnati L. T. Swallow & Assoc., Boulevard Bldg., Detroit Packaging Industries, 919 N. Michigan Ave., Chicago Marvin Yates Co., Arcade Bldg., St. Louis Container Service Co., 1266 Northwestern Ave., Los Angeles Plastic Supply Co., University Tower, Manuel Leon Ortega, 9a Hamburgo No. 218, Mexico, D. F.

STANDOUT DISPLAYS

Sell

Merchandise!



EYE APPEAL! CONVENIENCE! SELF-SERVICE!

Modern Merchandising demands all three. Ottawa River corrugated displays are SILENT SALESMEN. They're effective because they're consumer tested. Our design engineers will gladly help you solve your display problem. Write for illustrated folder showing patented all-purpose displays. The Ottawa

River Paper Company, Toledo 12, Ohio. Plants in Toledo, Ohio and Flint, Mich.





OTTAWA RIVER

DISPLAYS and SHIPPING CASES

APRIL 1948

S

\G

105



Ever Measure the Color of Your Package?



Yes, the color of your package can be measured. Measuring is done by a

Recording Photoelectric Spectrophotometer (we have one in our laboratory) which charts color as a line on graph paper. The chart becomes a permanent record. By charting later printings of your package and comparing them with the original, you can control the color no matter where or when printed.



Early Birds Catch the Best Colors

In package frinting, the early bird catches the best colors.
When he con-



sults his printer and printing ink supplier *early*, he has a better chance of getting accurate matches for his color scheme in printing inks. This precaution avoids possible discovery later that printing inks which match the colors selected do not possess the required degree of light fastness or resistance to deteriorants.

INTERNATIONAL PRINTING INK . EMPIRE STATE BUILDING, NEW YORK 1, N. Y. . ADDRESS INQUIRIES DEPT. MP4

THIS QUIZ, NUMBER TWO, CAN BE HELPFUL TO YOU

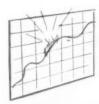
Here it is, our second quiz for fun and profit on what every package production man should know about printing inks.



1. Of course you know it doesn't do to select package colors blindly, but what can you do to be sure your color scheme is practical?

2. Look out or your face will be red on this one. How long do you think it should take to print (in two colors), tape, bundle, and pack 45,000 corrugated containers—()32 hours () 16 hours () 8 hours () 4 hours?

3. The curve in blue below might possibly be a blueprint for a roller coaster. But it's not. However, it is a spectrophotometric curve for a certain shade of red-() True () False?



Answers to Quiz: 1. Check colors with your printer and his printing ink supplier. 2. 4 hours—actually done with IPI Vaposet inks. 3. True. A set of such curves of your package colors would give you a valuable, permanent record.

GET OPACITY WHERE IT COUNTS WITH PIGMENTED ANILOX INKS

You don't need to be embarrassed by lack of opacity in your aniline printing. Not if you use 100% pigmented IPI Anilox inks. They have the color strength you need to produce opaque results.

Anilox inks also print sharp and have a high degree of light



fastness on patent coated papers, acetate, and foil. You can get good results on the more highly plasticized grades of cellophane.

All Anilox inks are alcohol soluble, and contain no solvents harmful to normal rubber rollers and plates.

WHEN IS A RED NOT A RED? CETTING GOOD RES WITH YOUR

We ran across an incident which shows how confusing it is to use loose color designations.

A customer ordered a "Fire Engine Red" over the telephone (of course, the ink maker was inviting trouble in



accepting the order in the first place). When the customer received the "Fire Engine Red," he complained that it was not a "Fire Engine Red," but an Orange. The salesman went over to see what could be done. When he came back, he said innocently, "You know that Fire Engine Red isn't Orange, it's a Chinese Red, so I sent him a Firecracker Red."

Moral: Order color according to A.S.A. Specification and avoid confusion.

GETTING GOOD RESULTS WITH YOUR WET-INK VARNISHING?

Metal decorators have been trying to save production time and space by wet-ink varnishing. Maybe you're satisfied with the results you've been getting, but if you aren't, the new Elixirin wet-ink varnishing system will interest you. Those metal decorators who have used the Elixirin system tell us it does away with most of the common defects of conventional inks and varnishes, such as bleeding, embossing, halo-ing, and orange peel.

WHAT'S NEW IN PACKAGE INKS? SEE THE IPI BOOTH AT THE PACKAGING SHOW

You'll find all that's new in printing inks for packaging on exhibit at the IPI booth at the A.M.A. Packaging Show in Cleveland, April 26 to 30. This year there will also be an In-Tag gravure ink section in the booth. Whatever your ink problem is, be it letterpress, offset, aniline, or gravure, we'll be on hand to talk it over with you.

Remember the popular little IPI Spectrum Box which IPI distributed as a souvenir



at last year's Packaging Show? This year the Spectrum Box will be back, packed with new and different contents sure to please you and be helpful, too. Visit the IPI booth at this year's show and get one of these surprising little souvenirs.

VAPOSET INK SETS QUICK AS A WINK



There's more truth than poetry in that headline. Vaposet ink does set quick as a wink in the presence of moisture. In addition, they are almost completely odorfree, which makes them ideal for food wrappers and packages. They can also be used on newly-fabricated, moist, warm corrugated board.



New Ideas Today Make Packaging Trends Tomorrow

Marathon invites visitors to the 1948 Packaging Exposition at Cleveland to visit our exhibit (Booth 405). The new packaging developments presented there will interest those men who are responsible for providing packaging to protect and merchandise America's foods. Marathon's facilities for research, development and manufacture of packages and packaging materials are widely diversified.

Our products range across the entire food processing field.

SEE WHAT'S NEW IN PACKAGING FOR:

The Baking Industry...Rigid-Pak, a completely sealed carton for automatic packaging of cakes and quality specialties. See it at Cleveland.

The Frozen Food Industry... Marathon's immaculately white carton for automatic opening, filling, closing. Pictorially printed laminated over-wrappers. See it at Cleveland.

The Meat Packing Industry... The new Marathon carton (direct fill, no liner) for bulk

sausage. Highly protective. A strong merchandiser. See it at Cleveland.

The Confectionery Industry... See Marathon's protective laminations for high-speed candy and gum package operations. Excellent roto printing on foils, cellophane or papers. See it at Cleveland.

The "Pre-Mixed" Food Industry... Check Marathon's high protection wrappers, liners and packages. Special developments for use in protection of hard-to-keep food products. See it at Cleveland.

For details on any of these packaging developments, write direct to Marathon Corporation, Menasha, Wis.



Modern packaging



Vol. 21 No. 8 April 1948

PACKAGE DIRECTIONS are written by editorial division of Consumer Service Department. Here, Rose Briem, head of this division, and Edna Mandler, one of her editors, scrutinize legibility of Jello packages.



PACKAGE COPY PLANNING

Acceptance of the product depends ultimately on its proper use by the consumer; that's why General Foods has whole Consumer Service editorial division devoted to writing package directions

Next to daily newspapers, perhaps the most read words in American living are the 6- to 10- point type directions and recipes on food packages. Three times a day, every day in the year, millions of women depend on them to feed their families.

Meticulously planned in allotted space, they are the manufacturer's protection against risk to his products in the hands of the consumer. His cake flour gets to the dinner table in the form of a perfect chocolate cake made from a recipe on the package only if that recipe is clear, proportions correct, measurements accurate, the cake made in pans to fit the recipe in a correctly

heated oven and if other manufacturers' products used in the making of the cake are up to standard.

Directions on the package must teach consumers to use the products so successfully that they will come back for more.

This aspect of package planning has been developed to a high degree of specialized editorial technique, backed by the most advanced methods of test kitchen procedure. In mass-production industry, it cannot be haphazard or done by guess work. This editing is so essential that large food companies today maintain whole departments to interpret their company's prod-







FLOW CHART shows place of package copy and direction preparation in General Foods set-up—how this division is related to over-all company activities through Consumer Service.

> TASTE TESTS are made continually by staff personnel and members of other departments for freshness, flavor, correctness of seasoning, geographical preferences, etc., all of which are factors in planning package copy.



ucts to the consumer and in turn to interpret the consumer to their companies.

One of the leaders is the Consumer Service Department of General Foods Corp., sometimes referred to as the "career girl's paradise" because it is comprised of a staff personnel of 75 young women of whom 27 are home economists whose sole job is to tell the women of the nation how to use General Foods products in a way that will make them buy more.

This department, under the direction of Marie Sellers and managership of Ellen-Ann Dunham, is divided into three phases of operations: (1) testing kitchens, (2) editorial and art, (3) consumer relations. It includes product-representative personnel for each GF product and a special division for products sold in institutional quantities to restaurants, hotels, hospitals, etc., and a test division for General Foods laundry products.

Package copy planning is the function of the editorial and art division under the direction of Rose Briem. New products usually originate in the product development department; new or redesigned packages usually come from the advertising department. The Consumer Service Department has very little to do with surface design, which is a function of the advertising department, or with package performance, which is a function of the Materials and Products Evaluation Laboratory under the direction of Dr. L. W. Elder. (See Modern Packaging, March, 1947, p. 117.) But whenever a new or revised package is conceived or designed, a sample of it, with space allowed for directions, is left blank and sent to Miss Briem. It is her job and that of her six editors to plan what goes in that space.

More than a hundred changes go through her department in a year and it is estimated that about a third of the time of her editors is spent on the preparation and editing of copy that goes on packages. It is never a last-minute job. Every word of the direction copy must be carefully selected to convey the right meaning, to be easily understood, easily read. Usually space is very limited, so that it takes extraordinary editorial skill, backed by scientific home-economics training, to condense the copy into alloted space and yet have it easy to understand and to break well on the lines when it gets into type. For example, the word "whipped" is impossible to divide—part on one line, part on another. When the direction information must be condensed into, say, an inch-and-a-half type measure, it takes skillful writing to re-phrase a sentence so that essential information is not altered and yet rearranged so the word "whipped" does not require a line division.

Good descriptive labeling

Preparation of package copy begins with what General Foods Consumer Service Department has outlined as the basic elements of good descriptive labeling:

- 1. Mandatory information—name of product, name of maker, weight, ingredients and other data peculiar to certain products such as patent notices, inspection lines, etc.
 - 2. Dependable directions, written in understandable,

BAKED RICE

Combined 1 slightly beaten egg yolk and ½ cup milk; mix well. Add 2 cups milk, ½ cup Min ute Nee. 2 cups milk, ½ cup Min ute Nee. 2 cups milk, ½ cup Min ute Nee. 2 cups usel. 2 cups milk, ½ cup Min ute Nee. 2 cups usel. 2 cups with the need of the Nee of Nee

oven and stir again.

Makemeringue of 1 egg
white and 2 tablespoons sugar. Drop by
spoonful on top of pudding. Return to oven
and bake at 400°F. until and bake at 400 F. Until meringue is slightly browned (about 5 min-utes). Makes 4 servings.

CREAMY PUDDING

Mix 1 egg yolk with ¼ cup mik in saucepan. Add 1¾ cups mik, ½ cup winter kice, ¼ cup sugar, ¼ teaspoon sait, ¼ cup sedless arisins. Place over medium heat and bring to a boil, stirring constantly. Boil gently about 10 minutes. Makes 4 servings. Nate: If desired, well-beaten egg white may be folded into hot pudding.

pudding.
Lemon Rice Pudding.
Use recipe above, omitting spices and raisins.
Add 1 teaspoon grated lemon rind after removing from heat.

MINUTE RICE is New-it's Revolutionary!

Here is a product that takes all the work out of preparing rice – no sorting or washing – no measuring – no long cooking or sticking to the pan. Time-saving Minute Rice has been cleaned, washed, and pre-cooked for you in

With Minute Rice, you get properly-cooked, snowy-white rice every time - every grain a separate, delicious morsel. It's always exactly right!

It's quick-just add Minute Rice to boiling water, heat, and it's ready to serve in a few minutes. And each package holds enough for one meal - 4 to 5 servings.

DIRECTIONS

Empty contents of package into 1⅓ cups boiling water in saucepan. Add ⅓ teaspoon salt and stir until all rice is moistened. Bring to a boil and remove from heat. Cover and let stand in warm place about 10 minutes, stirring once. Makes 3 cups or 4 to 5 servings.

Add Variety with Minute Rice

Prepare Minute Rice as directed above and try these tempting ways of serving and using:

- Add to cooked soups just
 Combine with meat, fish, e Use as a vegetable with butter or asserting.

suev or chow mein.

butter or gravy.

• Use in all favorite casser

• Serve with Creole or ole, salad, and dessert

Spanish sauceor with chop recipes requiring cooked

Try Minute Rice in the savory entreé and delicious dessert recipes given on the sides of this package.

rice.

BAKED RICE PUDDING

Combine 1 slightly beaten ell. Add 2 cups milk. sugar, and % teaspoon salt. Bring to a boil and simmer gently 10 minutes. Remove from heat and add 1 table spoon butter or margarine and dash of nutmeg. Turn into greased small baking dish and bake in moderate oven (325° F.) 20 minutes. Stir once while baking. Re move from oven; stir again

Make maringue of 1 egg white and 2 tablespoons sugar. Drop by spoonful or top of pudding. Return to oven and bake at 400° F until meringue is slightly browned (about 5 minutes)

CREAMY RICE PUDDING

Mix 1 egg yolk with ¼ cup milk in saucepan. Add 1¾ cups milk, ½ cup Minute Rice, ¼ cup sugar, ¼ tea-spoon salt, ¼ teaspoon each bring to a boil, stirring con stantly. Boil gently about 10 inutes Makes 4 servings

Note: If desired 1 well beaten egg white may folded into hot pudding.

Lemon Rice Pudding. Use recipe above, omitting spices and raisins. Add 1 teaspoon ving from heat

MINUTE RICE is New-it's Revolutionary!

Here's a product that takes all the work out of preparing rice – no sorting or washing – no measuring – no long cooking or sticking to the pan. Time-saving Minute Rice has been cleaned, washed, and pre-cooked for you

With Minute Rice, you get properly-cooked, snowy-white rice every time - every grain a separate, delicious morsel. It's always exactly right!

It's quick - just add Minute Rice to boiling water, heat, and it's ready to serve in a few minutes. And each package holds enough for one meal - 4 to 5 servings.

DIRECTIONS

Empty contents of package into 11/2 cups boiling water in saucepan. Add ¾ teaspoon salt and stir until all rice is moistened. Bring to a boil and remove from heat. Cover and let stand in warm place about 10 minutes, stirring once. Makes 3 cups or 4 to 5 servings.

Add Variety with Minute Rice

Prepare Minute Rice as directed above and try these tempting ways of serving and using:

- Add to cooked soups just
 Combine with meat, fish, before serving.
- poultry, or vegetables in one-dish meals. · Use as a vegetable with
- butter or gravy
 Serve with Creole or Spanish sauce or with and dessert recipes rechop suey or chow mein. quiring cooked rice.

Try Minute Rice in the savory entreé and delicious dessert recipes given on the sides of this package.

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IMPROVED READABILITY and emphasis are indicated by these step-by-step revisions of Minute Rice directions. (A) Direction copy as received by editorial division in September, 1945. (B) Same copy improved by revised typography and spacing. (C) Greater emphasis on directions and improvement in copy. (D) All-out emphasis on directions with admonition, "Do not cook like ordinary rice," to assure product acceptance in the hands of the consumer.

BAKED RICE PUDDING

Combine 1 slightly beaten egg yolk and ½ cup milk; mix well. Add 2 cups milk, ½ cup Minute Rice, ½ cup sugar, and ½ teaspoon salt. Bring to a boil and simmer gently 10 minutes. Remove from heat and add 1 table spoon butter or margarine and dash of nutmeg. Twrn into greased small baking dish and bake in moderate oven (325° F.) 20 minutes. Stir once while baking. Remove from oven the sain.

move from oven; stir again. Make meringue of 1 egg Make meringue of 1 egg white and 2 tablespoons sugar. Drop by spoonful on top of pudding. Return to oven and bake at 400° f. until meringue is slightly browned (about 5 minutes). Makes 4 servings.

CREAMY RICE PUDDING

Mix 1 egg yolk with \(\) cup milk in saucepan. Add 1 \(\) cup milk i, \(\) cup Minute Rice, \(\) cup sugar, \(\) teaspoon salt, \(\) teaspoon each nutmeg and cinnamon, and \(\) cup of seedless raisins. Place over medium heat and bring to a boil, stirring con-stantly. Boil gently about 10 ninutes. Makes 4 servings

Note: If desired, 1 w hore: If desired, I were beaten egg white may be folded into hot pudding.

Lemon Rice Pudding.Omit spices and raisins. Add 1 teaspoon grated lemon re after removing from heal

MINUTE RICE is New-its Revolutionary!

Here's a product that takes work out of preparing rice no washing - no long cooking. No sticking to the panless dishwashing! Time-saving Minute Rice has been cleaned, washed, and pre-cooked for you.

With Minute Rice, you get properly-cooked, snowy-white rice every time - every grain a separate, delicious morsel. Just add Minute Rice to boiling water, heat, and it's ready to serve in a few minutes

** * * DIRECTIONS * * * * *

Empty contents of package into saucepan containing 11/2 cups boiling water and 3/4 teaspoon salt. Stir until all rice is moistened. Bring to a boil and remove from heat. Cover and let stand in warm place about 10 minutes, stirring once. Makes 3 cups or 4 to 5 servings.

Note: To make smaller amount, use equal measure of rice and boiling salted water.

Add Variety with Minute Rice

Prepare Minute Rice as directed above and try these tempting ways of serving and using:

- · Add to cooked soups just · Combine with meat, fish, before serving.
 - poultry, or vegetables in one-dish meals.
- Use as a vegetable with
- Serve with Creole or Spanish sauce or with chop suey or chow mein.

 Use in all of your favorite casserole, salad, soup, and dessert recipes requiring cooked rine.

Try Minute Rice in the savory entrée and delicious dessert recipes given on the sides of this package.

BAKED RICE PUDDING

Combine 1 slightly beaten egg yolk and ½ cup milk; mix well. Add 2 cups milk, ½ cup Minute Rice, ½ cup sugar, and ½ teaspoon selt. Bring to a boil and simmer gently 10 minutes. Remove from heat and add 1 tabledish and bake in moderate oven (325° F.) 20 minutes. Stir once while baking. Re move from oven: stir again

white and 2 tablespoons sugar. Drop by spoonful on top of pudding. Return to oven and bake at 400° F. until meringue is slightly browned (about 5 minutes). Makes 4 servings.

Chocolate Rice Pudding Add 1 square Baker's U arl Chr

GLORIFIED

RICE
Combine % cup Minute Rice,
% teaspoon salt, 1 tablespoon sugar, and % cup
water. Bring to a boil, remove from heat cover, and move from heat, cover, and let stand 10 minutes. Add 12 marshmallows, quartered, 3 diced maraschi tered, 3 diced maraschino cherries, and 3c cup crushed pineapple. Cool. Then add 1 cup cream, whipped. Turn into sherbet glasses. Chill. Makes 8 to 10 servings.

Important |

DO NOT COOK LIKE ORDINARY RICE

Minute Rice has been pre-cooked for you

DIRECTIONS

FLUFFY RICE (Southern Style)

- Empty contents into saucepan. Add 13/4 standard measuring cups cold water and 3/4 teaspoon salt; mix.
- Bring mixture to a full rolling boil.
- 3 Remove from heat, cover, and let stand in warm place about 10 minutes.
- Before serving, fluff rice gently with a fork.

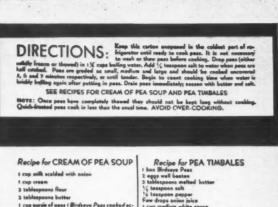
Makes 31/2 cups or 4 to 5 servings

If you prefer extra tender rice, follow directions above, increasing water to 2 cups (1 pint), Bring to a boil, cover, and allow to boil 2 to 5 minutes. Remove from heat and let stand 10 minutes.

For 2 or 3 servings, use % package (% cup) Minute Rice, 1 cup water, and & teaspoon salt, (Use either of above methods of preparation.)

Use Minute Rice—prepared as directed above—in any casserole, salad, soup, or dessert recipe which requires cooked rice.

Perfect, Fluffy, Snow-White Rice -Ready to Eat in a Jiffy!

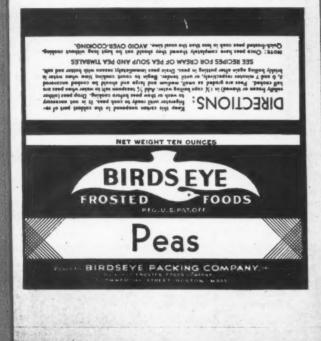


t cun milk scalded with naion

cop purie of peas (Birdseye Peas cooked at ording to directions and forced through

Malt butter, add Rour, milk and cream slowly and cook until thick and smooth; add pass

Try saving Birdseye Pass with Birdseye Lamb, Birdseye Salm nd Foods—the finest selected meets, fish, poultry, fru to you at their peak of perfection.



GREEN PEAS

These peas are best when used frozen

FOR DIRECTIONS SEE BOTTOM OF CARTON

Do not attempt to refreeze these peas after they have been thaward

GREEN PEAS

These young peas are garden-fresh—perfect in color and flavor. They are carefully sorted, washed, and shelled, and are ready to cook. This 12-ounce package equals 2 pounds peas in the pod and will serve 4.

DIRECTIONS

TO KEEP: Place this carton, unopened, in coldest part of refrigerator until ready to use. Birdseye Frosted Peas can be kept as long as they remain solidly frozen. Once they are thawed, they should be used promptly, for they will keep only as long as peas that have not been quick-frosted. Do not attempt to refreeze them after they have been thawed.

TO COOK: It is not necessary to thaw Birdseye Frosted Peas. Remove frosted peas from the carton and drop into % cup briskly boiling salted water. Bring again to a boil and boil 5 to 7 minutes, or until peas are just tender. Remove from fire and drain, if necessary; season with butter, salt, and pepper. These peas require less time to cook than peas that have not been quick-frosted; they will be tender, and of delicate fresh flavor and excellent color, if they are cooked carefully according

Do not throw away any liquid left after cooking these peas. It conta neral salts and should be served with the peas, or used in sauce, soup, or for other suitable dishes.

FOR DIRECTIONS SEE BOTTOM OF CARTON

GREEN PEAS

NET WEIGHT 12 OUNCES

BIRDS EYE

FROSTED FOODS

GREEN PEAS

Directions on bottom of carton

Packed for FROSTED FOODS SALES CORPORATION NEW YORK, N.Y.

1932

1935

COPY HISTORY of directions on Birds Eye green pea packages. Note progressively more usable information with each revision. In 1932 directions were repeated, but in too small space, hard to read, while less useful directions for "made" dishes were featured on back panel. On 1935 package, recipes disappeared and all emphasis was given to keeping and cooking the peas. At that time consumers had to be educated in using frozen foods, which were then new.

every-day language, printed in the most readable form.

- 3. Other data that may be given on various topics as applicable to the product:
 - (a) Quality—size, inspection, maturity, etc.
 - (b) Nutritive value.
- (c) Processing—such as vitamin content, fineness of milling, etc.
 - (d) Source—where the product comes from.
- (e) New product explanation, what it is, ways of handling it.

(f) Special values to consumer such as ease of preparation, time saving, economy of other special advantages.

Mandatory copy, of course, is taken care of before the package is turned over to Consumer Service. The real concern of this department is directions. They are thinking of the package in the hands of the consumer and what they will put on it to tell her what to do with the product that's in it.

Most important are what are termed, "ingredient products"-such as Swans Down cake flour, Calumet



These sweet young green peas of uniform tenderness are shelled, sorted, washed, and ready to cook without any further preparation. This 12-ounce package will serve 4.

Do not attempt to refreeze these peas after they have been thaward.





Place carton, unopened, in refrigerator until ready to use. Once thawed, use promptly in order to obtain best results. Do not attempt to refreeze this vegetable after it has been thorwed.

Birds Eye vegetables can be kept solidly frozen in freezing compartment of the refrigerator.

TO COOK



1. Drop the pees, frozen or thewed, into ¾ cup briskly boiling suited water.

2. Bring again to bail and bail gently 5 to 7 minutes, or until just tender. Do not overcook.

3. Drain, itnocessary. Season to taste with butter, soit, and popper. TO SERVE



Serve the peaswith butter or cream or combine with other vegetables, such as carrots or small onions. Use in soups, in creamed entreés, or salads.

Save any liquid left after cooking. It contains valuable mineral saits and vitamins and should be served with vegetable or usedinsauces, soups, etc.

Each product is of uniform high quality. Thy any one, if you do not agree that it is the bast you ever tasted, go back to your Birds Eye Store and YOUR MONEY WILL, BE REFUNDED!

There are more than 50 kinds of Birds Eye Foods—Fruits, Yegelables, Fish, Poultry.

READ THIS BIRDS EYE GUARANTY

NET WEIGHT 12 OUNCES



IMPORTANT

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GREEN PEAS

Distributed by BIRDS EYE — SNIDER, INC. NEW YORK, N.Y.

1940



Green Peas Date young, groon poat are a largesize—safetched for top quality. Each package equals 2 pounds of peas interned. Quality and pease about 2 pease to the late to the design of the pease of

a basi down the manufacture is bester therefore, with adults, sedere best and residuals, sedere best and residuals, se smill vegeto.

3. DO NOT OVERCOOL.

Serve at eace.

Annual Control of the pass are desired at the pass are desired deficious served with sauce. (Lete inflorer vegrable reserve food value.) Of combine basic, or meal, children, or plittle multier, error definers, or plittle multier.

i. Drop pees, recover in such boiling solited water in such boiling solited water believed to be believed by then the wester believed some coek greatly S to 7 minutes, bit is just sender. Do MOI 3. Secson to tuste with barit selfs, serve of self, and peoples. Serve of self, post benefits of self, and peoples. Serve of self.

TO SERVE
seell-seasoned white sauce. (U
hquor in sauce to conserve foo
peas with other vegetables, or
in select, slews, casserote drah

TO KEEP

thawing, Keep solidly frozen in
the freezing unit of the refrigere
freeze it but code as soon as no

This product should be kept solidly frazen until used to insure garden-fresh flavor.

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1947

PICTORIAL DIRECTIONS appeared on the package in 1940, gave more attention value to storing and cooking information. In 1947, direction copy was adapted to the new Birds Eye four-color packages. Cooking directions became even more prominent, but other information on handling was subordinated as consumers became more familiar with the handling of frozen foods. Product descriptions have also been added to feature quantity and quality of the peas.

baking powder, Jell-O desserts, Sure-Jell, Minute Rice, Baker's chocolate—products that are used in the preparation of various foods—rather than Post's cereals, Log Cabin Syrup, etc., which are ready to serve.

Kitchen testing

Before any package copy can be written or edited, the products must be tested for their behavior in the test kitchens. Hundreds of recipes must be tested and tasted before the editorial division, for instance, can

write on a package of Calumet baking powder:

"Use 1 level teaspoon of Calumet Baking Powder for each cup of sifted flour. This '1 to 1' proportion gives the best results in most recipes, slightly more is needed in recipes using bran, graham flour or corn meal."

Only many kitchen tests can substantiate, too, such statements as:

"Baker's chocolate melts quickly and easily. It need not be grated or cut in small pieces. Simply place squares in small, round-bottomed bowl and melt over hot water—never over direct heat. Cool chocolate slightly before adding to mixture. A rubber plate scraper is an excellent tool to use for removing all melted chocolate from bowl."

The test kitchen is also responsible for developing more complete cooking procedure that can be described in the package copy to aid the consumer. An example is the current recommendation in cake recipes to count strokes when beating a batter by hand rather than timing the beating by minutes. Most women do not beat the same number of strokes per minute, but if the recipe specifies approximately 150 strokes per minute, there is just that much more chance of accuracy in preparation.

Taste preferences

Recipe copy for packages cannot be written until the test kitchens have arrived at combinations which they believe will taste good to the average consumer. This is not so easy to determine. So far there is no practical established scientific method to determine taste other than averages obtained by group sampling. General Foods uses group-sampling methods similar to those used in all testing kitchens today to determine taste preferences. Usually, however, those participating in taste tests are not asked to taste more than two formulas at the same time, giving their preference for one of them. Further recipes are prepared with changed formulas, say, with more or less sugar, more salt, more seasoning-as the case may be--and preference tests continued until what is believed to be an average is reached.

Tasting is usually done first by members of the Consumer Service staff on the theory that the best tasters are those who have had the most experience in tasting. As home economists are familiar with thousands of recipes, they should have a broader basis for taste comparisons. To state this principle in another way: you wouldn't be a very good taster of Oysters Rockefeller, for instance, if you had never eaten Oysters Rockefeller. You wouldn't be a very good judge of them either unless you had eaten them in several restaurants that specialize in this dish, perhaps in New Orleans, so that you would have a basis for comparing those tastes with Oysters Rockefeller prepared in New York or San Francisco.

To compensate for geographic variations in taste preferences for recipes on packages that have national distribution, the Consumer Service Department aims to employ among its personnel home economists representative of all geographic areas. In this way they believe they are more likely to arrive at recipe formulas that will please the greatest number. The directors have also observed that certain young women are better tasters than others; that some are more sensitive to sweetness; others, better on aroma, etc. If a girl in the department has a definite dislike of certain foods she does not vote in any taste tests of those foods. For instance, some do not like onions. They are asked then not to vote on recipes which contain onions.

After the staff taste tests have been made, the recipes are often prepared for tasting by various other groups

in the company. The Consumer Service Department also has a consumer panel of some 25,000 women throughout the country to whom samples of General Foods products may be sent, asking them to prepare a test recipe. Much valuable information on performance of products and taste preferences are obtained in this way.

Direction-copy writing

When all these data are assembled and classified, they are tabulated on work sheets and the final recipes to be used for package copy may be written and edited by the editorial department, which now has a manuscript file containing something like 8,500 tested home-sized recipes and 1,000 tested large-quantity recipes for institutions.

When a package is revised, or a new one developed, the editors can draw on this file for recipe data on almost any type of dish. Like publishers, they are always watching new trends in their field and when there is particular demand, say, for a certain type of cake or dessert, they can present such a recipe on the revised package. They consider carefully, too, preferences in various sections of the country. When preparing package copy for the recently introduced 40-Fathom clam chowder, they gave directions for making it both New England and Manhattan style.

The editorial division takes great pride in its recipe writing and through careful outlining of principles has made much progress in making the copy interesting. Some of the editors have had training in this kind of writing in their home-economics courses, which is a great help. "But like all writing, some is inspired and some is not," says Miss Briem, "and it still depends on the skill and talent of the writer how much appetite appeal you can get into a 50- or 100-word recipe for devil's food cake."

The editorial department has very little to do with determining the number of servings in a package. This is usually determined by market research, based on consumer demand or competition. Occasionally Consumer Service recommends new convenience features in packaging which they hear of through letters from users, or which they discover through testing in the kitchen. For instance, they have made recommendations for a larger flange on the Baker's Cocoa can, so the lid wouldn't fall in.

Typography

Once direction copy has been approved, the next step is to arrange it within space limitations so that it is easy to read. No publisher has ever gone into the study of typography more scientifically than these women to present the consumer directions in a form that's easy on the eyes. A glance at the illustrations with this article gives some idea of the progress they have made. They have sometimes used smaller type with more space between lines to get better legibility. They have developed the narrative-style recipe for small space where the tabular form is (Continued on page 284)



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This month's COVER PACKAGE*

No. 16 of a series

A paper goods manufacturer supposedly is planning to THE PROBLEM: package a new line of facial tissues, paper towels and paper napkins made of an exceedingly soft paper with remarkable wet-strength properties in spite of its thinness. It is to be a luxury line, but sold competitively with advertised brands. The problem is to build consumer acceptance for these newcomers—a project that requires skillful handling today when the public has turned en masse back to well-known, advertised brands after unsatisfactory experience with inferior substitutes during the war years. The design must be suitable for one-color printing, have a feeling of high quality, strong product identity and memory value, and be dissimilar to any competitive brand. The packages must have feminine appeal, as almost 100% of them will be purchased by women. They must stimulate impulse sales, stand out well in advertising illustration and be attractive for kitchen or bathroom shelf.

THE SOLUTION:

The designer selects the name, Iris, because of its shortness and its strong memory value. The suggestion of the flower, itself, as a background for the name makes the trademark unforgetable. A flower motif has strong feminine appeal. The simple statement, "soft as a flower petal," accents the outstanding characteristic of the product and associates product quality with trademark. The bright blue color is chosen because it stands out on store shelves better than any other color that might be used to denote quality. A red or a yellow package might have striking attention value, but will not convey quality, it is believed. To develop a continuity of color consciousness on the part of the purchaser, the towels, napkins and tissues are tinted a delicate shade of blue so that the blue package will be remembered when the consumer needs a resupply. The design printed entirely in one color makes production very economical. Greatest care has been taken in the preparation of lettering so that the simple trade name, Iris, is seen on all surfaces.

THE DESIGNER:

Annual sales of packages designed by Egmont Arens are estimated to be more than 55 millions. Mr. Arens attri-

butes this success to close study of merchandising. He spends hours of his time, he says, in retail stores watching the buying habits of the American housewife. He tries to find out what makes her reach out and grab. He puts the results of those findings into his designs. That is why he achieves an enviable record of sales increases for the packages he has designed and frequently walks off with top awards in packaging competitions. Mr. Arens is a Fellow and Secretary of the Society of Industrial Designers and an instructor on product design and packaging at New York University. He is consultant in design, color, packaging and product development for such firms as A & P, General Transportation Co., Philip Morris, Coca Cola, Carborundum and many others.



EGMONT ARENS

Brand and company names used in the hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental.



READY FOR THE PACKAGING SHOW

The dates of the 17th annual American Management Assn. Packaging Exposition and Conference
—April 26 to 30 in Cleveland—represent more than ever this year a Packaging Week.

Organized on a more ambitious scale than ever before, the Exposition has been extended to cover five days and the Conference four days. The week has been officially set aside as "Packaging Week" and more than 250 trade associations representing the industries which are the largest users of packaging are joining with A.M.A. to promote concentration of public attention on the economic advantages of packaging.

The eyes of the packaging world, quite literally, will be focused on Cleveland's Public Auditorium during this last week of April, for special effort has been made, through the embassies and consulates of every foreign country, to attract international notice. Already advance registrations have been received from 15 foreign lands, including a contingent of several hundred from Canada.

Built around the slogan "Proper Packaging Protects the Product and the Purchaser," Packaging Week will stress protection against damage and deterioration, convenience, assurance of quality through adequate product identification and the role of packaging in extending the marketing area of perishable products at lowered cost. In Cleveland, everything is in readiness. Hotels have been forewarned to expect a crowd of as many as 20,000 (in contrast to last year's record 16,000 visitors in Philadelphia) and the special A.M.A. Housing Bureau at 511 Terminal Tower, Cleveland, is still prepared to take care of late comers.

Both the Exposition and the Conference sessions will be held in the huge Cleveland Auditorium, conveniently situated on the lakefront within easy walking distance of the railroad stations and all principal hotels.

The Conference will open officially at 9:30 A. M., Monday, April 26, with a general session of interest to all packagers. As the first session ends at noon on Monday, the doors to the Exposition will open to visitors. This year the program has been arranged so that there is no conflict of hours between the Conference and the Exposition. Conference sessions will be held only in the mornings of the first four days and on those days the Exposition will open at noon. On the final day, Friday, with no Conference session scheduled, the Exposition hours will be 10 A. M. to 3 P. M. On Wednesday, the Exposition will be open until 10 P. M.; on Monday, Tuesday and Thursday, it will close at 6 P. M.

There will be concurrent Conference sessions, organized around two entirely different subjects, on Tuesday morning. One of these will be of interest

primarily to those dealing with shipping containers and industrial packaging; the other simultaneous session will interest the consumer-product trades.

Expected to attract the widest general interest are the two unusual packaging "clinics" that will occupy the entire conference sessions of Wednesday and Thursday.

The first, on Wednesday, will be a shipping-container clinic, at which W. R. Hummel of the Merchandise Methods and Results Dept., Western Electric Co., will lead a discussion of the relative advantages and disadvantages of all types of industrial packaging, packing and shipping containers. He will have with him several examples of each method, which will be installed on the large stage of the Music Hall in the Auditorium, and a staff of about a dozen Western Electric assistants, who will explain the details of each package and answer questions following Hummel's opening discussion. The audience will be invited to file up on the stage and examine the examples at close range. The examples will be Western Electric shipping packages running the wide range of that company's products from telephone booths to tiny electronic tubes.

On Thursday, the clinic will deal with consumer packaging. It will be conducted by E. A. Throckmorton, vice president in charge of A.M.A.'s Packaging Division and president of the Container Testing Laboratories, Inc. Assisting him will be a panel of a type never before seen at these meetings, consisting of a package designer (Jim Nash), a packaging technician (Lee Hickox), a food technologist (Milton Parker), a psychologist (James Vicary) and a housewife (Mrs. L. A. Woods, of Prairie View, Ill.). Slides projected to 6-by-8-ft. size of typical packages and displays found in retail stores will form the basis of their discussion of brand packaging. Because of the range of viewpoints represented, this is expected to be an extremely interesting and valuable session.

About 2,000 registrants (A.M.A. members or special registrants) will attend the conference sessions and the bulk of the expected 20,000 visitors will confine themselves to the exhibits of every type of package, material, equipment and service, which will be spread through four large connected halls in the Public Auditorium.

At press time 178 exhibitors already had made arrangements for Exposition space and the final number was expected to be close to 200. The total of floor space devoted to the Exposition is 100,000 sq. ft., making it the largest ever.

As usual, other packaging organizations are taking advantage of this largest packaging gathering of the year to hold their own meetings. The Packaging Machinery Mfrs. Institute will have a semi-annual business meeting and dinner at the Hotel Statler on April 26. A joint meeting of the Technical Committee and the Standards and Practices Committee of the Packaging Institute will be held at a luncheon April 28 at the Hotel Cleveland.

Alvin E. Dodd, president, and Henry J. Howlett, secretary of the American Management Assn., are in

general charge of the Exposition and Conference. The Exposition is managed by Clapp & Poliak, Inc., with an A.M.A. Exhibitors Advisory Committee headed by Alan S. Cole, general manager of Modern Packaging, and including: A. B. Clunan, Goodyear Tire & Rubber Co.; J. M. Cowan, The Dobeckmun Co.; N. A. Fowler, General Box Co.; R. D. Handley, Sylvania Division, American Viscose Corp.; R. E. Hanson, Milprint, Inc.; E. J. Heimer, Barrett-Cravens Co.; M. P. Junkin, National Metal Edge Box Co.; C. F. Manning, Reynolds Metals Co.; E. J. Marsh, Marsh Stencil Machine Co.; Paul Meelfeld, Hinde & Dauch Paper Co.; Tom Miller, Packaging Machinery Co.; K. M. Peterson, Pneumatic Scale Co.; L. L. Pilliod, Pilliod Cabinet Co.; Paul Thompson, Sherman Paper Products Co.; James Turnbull, Monsanto Chemical Co.; M. W. Waggoner, Better Packages, Inc.; Richard Wellbrock, New Jersey Machine Corp.; B. M. Williams Gaylord Container Corp.

Members of the Packaging Council assisting Mr. Howlett with the Conference arrangements are: F. A. Biederman, Kimberly-Clark Corp.; A. B. Brackett, General Foods Corp.; J. L. Bradshaw, Pyrene Mfg. Co.; Dr. F. C. Campins, Polymer Industries, Inc.; W. W. Fitzhugh, William W. Fitzhugh, Inc.; N. A. Fowler, General Box Co.; A. L. Green, Assn. of American Railroads; E. A. Hildreth, Owens-Illinois Glass Co.; R. A. Hoffman, Arvey Corp.; W. R. Hummel, Western Electric Co.; Douglas Kirk, Quaker Oats Co.; L. W. Ledbetter, Ralston Purina Co.; J. D. Malcolmson, Robert Gair Co.; Glenn Mather, Continental Can Co., Inc.; C. V. Nelson, General Mills, Inc.; D. D. Pascal, National Starch Products, Inc.; G. W. Reese, American Can Co.; W. L. Romney, Procter & Gamble Co.; W. J. Sanning, Kroger Co.; L. B. Steele, E. I. du Pont de Nemours & Co., Inc.; Dr. C. E. Waring, Davison Chemical Corp.; J. A. Warren, American Home Products Corp.

For those exhibitors who responded to a Modern Packaging questionnaire, the following alphabetical list gives details of exhibits, names of key personnel attending and their hotel headquarters, wherever available. (A complete list of exhibitors and booth numbers, as of press time, appears on the attached tear-out Guide to the Exposition, along with the Conference program, a diagram of the Exposition floor and a map of downtown Cleveland):

A-B-C PACKAGING MACHINE CORP., Booth 309. Automatic case unloader and scrambler. Personnel: Morris P. Neal, Omer A. Rupp, Iven G. Nichol, Virgil Dice. Hotel: Auditorium.

ACME STEEL CO., Booth 215-B. Wire stitchers for attaching articles to cards, for sealing filled bags and stitching shipping containers. Personnel: J. E. Ott, F. R. Grove, P. L. Dafoe, E. T. Irvine, W. E. Kramer, N. L. Anderson, E. P. Schulz, R. E. Crabb, W. M. Snyder. Hotel: Cleveland.

ALDEN PLASTIC CORP., Booth 622. Plastic injection molded boxes—Chinese chest (Continued on page 246)

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Mulsummer Nights Dreum ALL YEAR ROUND!

THIS IS THE AD that fathered the package. A full-color photographic reproduction, it ranked highest in reader attention of any *Life* ad ever reported in the Starch Advertisement Readership studies.

The attention value of a dramatic, full-color, photographic reproduction was demonstrated for Landers, Frary & Clark, the New Britain, Conn., manufacturers of Universal brand electrical appliances, when they launched national consumer advertising last spring on their new electric blanket.

A full-page ad that appeared in *Life*, March 3, 1947—showing a lovely Powers model snuggling into the comfort of a Universal electric blanket while snow blows through the open bedroom window—was revealed by

AD BOX

Famed ad illustration, reproduced in 6 colors on a folding box for Universal electric blanket achieves integration of promotion and packaging

the Starch Advertisement Readership Service to have the highest percentage of consumer reading, interest and memory value of any *Life* advertisement ever tested by that method up to that time.

Results obtained from late, appearances of ads featuring the same Kodachrome illustrations in the Saturday Evening Post, Look, Good Housekeeping and other mass-circulation magazines confirmed the conviction of Landers, Frary & Clark sales executives that they had, in this eye-catching and demonstrative color illustration, a most powerful theme for all their promotional efforts.

It was something that seldom, if ever, had been done before—but Landers, Frary & Clark decided that nothing could be more potent as a package design than to plant that same full-color ad illustration right on the top of the box in which the blanket is merchandised—giving an unmistakable tie-up and identification with the advertisement that millions of magazine readers had seen and noticed.

The resulting package, shown in the accompanying illustrations, carries what is believed to be the largest



REPRODUCED on the box top, ad illustration becomes one of the largest Kodachrome pictures ever printed on boxboard. Box measures 18 by 25 in. It is a full-telescope folding box, shipped flat and set up as used.

full-color photograph ever reproduced directly on boxboard. The top of the blanket box, which is entirely covered by the photograph except for the small, inset logotype, measures 18 by 25 in. It is printed in six colors by the offset lithographic process. It is a full-telescope folding box, the cover and base being shipped flat from the box plant and set up by Landers, Frary & Clark as needed. The box plant pre-glues the side flaps and the user completes the set-up on an Obaco machine that glues the end flaps and reinforcing tabs.

As can be well imagined, the reproduction of a Kodachrome on this scale called for a major investment in art work and engravings, but the company felt it was justified, both as a means of attracting the customer prior to sale and for its re-use value, providing a per-

manently favorable association with the company name. Research has established the fact that blanket boxes are retained by many housewives year after year as a convenient means of storing and protecting valuable blankets during the months when they are not in active use and it was felt the beauty and color of this box would assure its permanent reception for this purpose.

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Additionally, it was believed that the impressive package, with its direct association with nationwide advertising, would win favorable display space in the retail store. Even a single package makes an impressive display when the cover is removed and placed vertically behind the open base which holds the blanket itself. Even on the store shelves the package has, as later proved, attracted shoppers by its color and unusualness.

A two-level platform is provided at one end of the base to hold and display the "Slumber Sentinel" temperature control and the electric cord. This also is set up from a flat folding blank, in the form of a straight-tuck box, and its surface is printed in dark maroon with the Universal trade name and sales message in reverse white.

From the sales results achieved to date, according to S. G. Fisher, sales manager of the Blanket Division of Landers, Frary & Clark, this unusual packaging-advertising tie-in and the heavy investment in color have

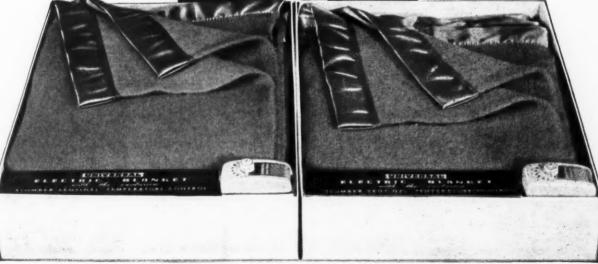
been amply justified. The full-color illustration and the new box have become a virtual trademark for Universal electric blankets, being used in promotion and advertising, direct-mail literature, sales manuals, envelope inserts, catalogs and dealer specification sheets. Dealers are also supplied with suggestions for displays using both the blanket boxes and other display material.

"The package alone won't sell the blanket," Landers, Frary & Clark tell the dealers, "but it's a 'customer stopper' to provide the opportunity to tell the advantages of the product."

CREDIT: Box developed and produced by National Folding Box Co., Inc., New Haven, Conn.

COLOR PRINTING, achieved by six colors in offset lithography, is unusually realistic. This is a typical display set-up for window or showcase. Memory tie-in of ad and package has proved a customer-stopper.





MARGARINE



KNEADING COLOR in the bag is made possible by a tough and tasteless new plastic film that combines vinyl with nitrile rubber. Housewives now demand this convenience and the position of margarine in competition with butter is vastly improved. Four brands now use the pouch.

The squeeze-color plastic pouch for oleomargarine, disclosed in Modern Packaging nearly two years ago*, has been one of the most spectacularly successful packaging innovations in many years. Rewarded for its courage in pioneering the revolutionary package by a two-year exclusive, the Cudahy Packing Co. in this time has seen its sales rise no less than 1,200%—from virtually last in the margarine field to among the leaders—while competitors (some of whom passed up the same opportunity that Cudahy seized) scrambled frantically to get on the bandwagon.

Cudahy's exclusive on the patented pouch expired Jan. 1 and within the last month three other licensees have gotten into production with this package which makes it fun for the consumer, rather than a nuisance, to color the oleomargarine (which, due to the tax penalties of the law, cannot be sold at a price competitive with that of butter if it is pre-colored by the manufacturer).

Now on the market in the new package are the Blue Bonnet brand of Standard Brands; the Parkay brand of Kraft Foods and Mrs. Filbert's, produced by J. H. Filbert, Inc., of Baltimore—all national-selling brands with large promotion budgets. Reported ready to come in just as soon as they can get adequate supplies of the special package are Capital City Products Co., Columbus, Ohio; Churngold Corp., Cincinnati, Ohio; Shedd-Bartusch, Detroit, Mich., and Durkee Foods, Cleveland, Ohio.

Additionally, there is the surprise announcement from Swift & Co., Chicago, that it will package its All-

* See "Self-Coloring Package for Oleomargarine," June, 1946, p. 136.

sweet margarine in its own "Jiffy-Color Bag"—a package which, from the description, appears to have all the features of the existing patented package. The announcement says that the bag (which is understood to be made of a plastic film of an unidentified type) was designed and developed by Swift's own packaging experts. Apparently Swift intends to challenge the patents held by the inventor of the original Cudahy package, to whom all the other users are paying royalties. The Jiffy-Color package already has been introduced in test areas and, according to the Swift announcement, it will be distributed nationally after packaging lines have been converted.

Neither this explosive development nor the faint prospect that Congress may, at this session, repeal the anti-colored-margarine law has, however, deterred the plans of dozens of other margarine producers, who can see all too plainly that if they are going to stay in the race they have got to match the convenience of the self-coloring package.

This is a good time to review the entire development, filling in details that were not available when the first package appeared two years ago. It is a remarkable story of cooperative effort by inventor, user, supplier and converter—each making an important contribution to the ultimate success of a package which, more than any other in recent years, has won phenomenal acceptance on the single, vital point of consumer convenience.

Birth of the idea

Eight years ago Leo Peters, the father of the package, was a member of the Marketing Research Department of Armour & Co., Chicago. He was not a chemist, but he knew what properties he wanted in the finished film and he worked independently with technicians until it was obtained.

The components of the tough, tasteless, odorless, transparent film were for a long time a closely held secret, but it is now generally known in the trade that it is a film of vinyl, modified with nitrile rubber (Hycar). The use of the nitrile rubber obviated the use of a conventional plasticizer, which previously had given to vinyl film an odor that was considered to make it unsuitable for food packaging. The nitrile also enhanced the physical properties of the film. Unusual "stretch and return" are required for the margarine pouch because of the abuse to which it is subjected in kneading color. The material as now used has a maximum allowable stretch of about 200%, with approximately 80% recovery, and it can be stretched 300% before rupturing.

Mr. Peters' patent (held in the name of Lion Rock Corp.) is a rather broad one, covering in general terms id

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SQUEEZE

Big rush is on, as the exclusive on color-kneading plastic pouch expires. Here is the first full story on the convenience package that made itself a must



BLUE BONNET, by Standard Brands, illustrates complete directions on inside of carton along with convincing sales arguments for product.

PARKAY, produced by Kraft Foods, calls it "Color-Kwik" and diagrams directions on a side panel. Other directions are inside the carton.

the packaging of margarine and color together in a sealed, flexible bag. It merely specifies that a flexible plastic film is to be used and does not define the nature of the film. According to Mr. Peters, the nature of the coloring ingredient or the precise manner in which it is contained within the parent pouch are not important; all possibilities are covered, he believes.

With his patent-application papers in his pocket, Mr. Peters approached virtually all of the major margarine producers, attempting to get them to try his idea. Some told him it was hopeless; others pointed out the difficulties of developing a supply of suitable film and the machinery to make it into a pouch; others were interested, but wanted a longer protection period than Mr. Peters felt he should grant.

Among others, according to an article in the February, 1948, issue of *Fortune*, Mr. Peters approached the head of the margarine division at Armour & Co., where he was still working at the time, and demonstrated his idea by kneading margarine and a color capsule to-



FILBERT'S makes a change from butter print to a flat package and peps up carton design while stressing that color capsule is "in the bag!"

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A LONE WOLF is Swift & Co.'s Allsweet, which announced a "Jiffy-Color Bag" independent of the Peters patent. Details are not revealed.

gether in a rubber balloon. According to Fortune, "he was laughed out the door."

Finally, the inventor got together with Cudahy on a deal which suited both parties. Cudahy was given a two-year license and agreed to throw its resources into commercial development of the idea and its eventual sales promotion. There was still a lot of work to be done in perfecting a film, developing methods for making, filling and sealing the bags, etc., and Cudahy played a very important part in this pioneering work.

Development of film

Credit for development of the film as now used must be given to The Visking Corp., Chicago, which worked very closely with Mr. Peters in the early stages. Visking has supplied the bulk of margarine-bag needs with the material, trade-named Visten, which is produced in the form of an extruded tube $4^{1}/_{2}$ in. in diameter with walls averaging $1^{3}/_{4}$ mils thick. Visking, however, has been unable to expand its production facilities sufficiently to meet all of the demand for the margarine bag and it is understood that a similar film in sheet form is now being produced by Bakelite, the principal difference being that the resultant pouch is sealed on three sides instead of just the two ends.

The film is heat sealing at around 265 deg. F. and has a workable temperature tolerance on sealing of about 15 deg. plus or minus. Figures are still not available on its water-vapor permeability (although the figure is said by all parties to be "very low") nor on its tensile strength, which obviously is very high. It has a low rate of oxygen transmission and is somewhat clearer than polyethylene, although not as clear as cellophane. It becomes brittle at freezing temperatures and, therefore, does not appear applicable to frozen foods.

Cudahy, after extensive experimentation, worked out methods of filling and sealing the bags and—for obvious competitive reasons—still will not disclose this knowhow. It is understood, however, that filling and sealing in all plants is still no more than semi-automatic.

There is an unconfirmed report in the trade that a

large machine builder is working out a method by which two strips of the film, in roll form, can be filled with margarine and color and simultaneously sealed by electronic means, obviating the need for prefabricated bags. One licensee of the Peters pouch is reported to have ordered six of these machines, which are said to offer a speed of 50 packages per minute.

Converter's contribution

Originally, when Cudahy was getting started, Peters fabricated bags from the Visten material virtually by hand, using facilities of a Chicago plant. It was obvious, however, as soon as reports were in on the first sales tests, that a mechanized, high-speed bag-making operation would be absolutely essential and for this part of the development credit goes to the Shellmar Products Corp., Mt. Vernon, Ohio.

The Shellmar Engineering Department designed and built a machine capable of handling either continuous extruding tubing or of forming tubes out of flat webs of material. The operation of perforating the color patch, inserting the capsule of coloring matter, sealing the patch in place on the inner surface of the pouch and sealing the bottom edge of the pouch is completely automatic. The accompanying pictures of this machine and the resultant pouch prior to filling are the first ever published. The attendants are merely inspectors who examine each pouch as it comes off the machine and lay it in a tray for shipment. The pouches must be carefully protected and packaged in specially designed containers for shipment to the oleomargarine plants to avoid breaking of the color capsule.

At present, Shellmar is the sole supplier of fabricated pouches and although production has been expanded at a prodigious rate, it has never been able to catch up with the steadily mounting demand. Batteries of the pouchforming machines are in operation in Shellmar plants at Mt. Vernon and Zanesville, Ohio, and South Gate, Calif. The company says that it has ample converting capacity to supply the pouch requirements of all license holders. However, supplies of film have not yet been adequate to meet the demand, although several nationally known film producers are understood to be about ready to enter the field.

Standard Brands' experience

The experience of Standard Brands is typical of those who have recently adopted the new package and provides an interesting insight into cost and handling factors.

One of the most remarkable aspects of the package is that the almost universal demand for it has developed in spite of the fact that it adds an estimated three to five cents to the cost of each pound package of oleomargarine. The material in its present stage of development is not cheap. However, manufacturing facilities are being improved and as rapidly as efficient machinery and processes are developed it is quite probable that there will be a substantial reduction in cost, according to the pouch fabricators.

Standard Brands estimates that its cost for the bags and royalty is about $3^1/_4$ cents each, with additional cost to be reckoned for the additional labor of handling and filling and the spoiling of some bags in handling. It estimates that the squeeze-color package altogether is costing about four cents more than the conventional package. However, Standard Brands is selling it at only two cents premium and absorbing the difference (charged to advertising and sales)—because it believes consumer demand for the package is that important. There is a good prospect that cost will come down nearer to the break-even point with expanding production later this year.

Standard Brands had to work out a semi-automatic filling operation, converting conventional machinery for the purpose. The margarine is packed in a semi-fluid condition—a distinct departure from conventional methods. Standard Brands has six fillers on a line, foot operated by girls who have to watch sharply for possible breakage of the bags. The girls simply open the bags and hold them under the spout of the net-weight filler, then pass the open edge of the bag through a rotary heat sealer to complete the closure. Cartoning is a hand operation.

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Despite the costs and difficulties, Standard Brands—like other users—is enthusiastic about the package. Sales reports speak in a very loud voice. In the three months since shipments of the new Blue Bonnet package started, sales have shown an increase even above the best expectations in every area where deliveries have been made—Pittsburgh, Baltimore and Philadelphia. The company expects to expand to national distribution as rapidly as possible.

All users have, of course, revised their carton labeling to play up the new convenience feature. Standard Brands calls the pack "Yellow-Quik." Kraft has adopted the name "Color-Kwik" and Filbert features the "Press-to-Change color capsule." Cudahy's well-publicized trade name is "E-Z Color Pak."

Most users also employ the inside surfaces of the carton, which are exposed when the bag is removed for coloring, to give diagrammatic instructions and point up the advantages of the package: coloring without dirtying hands or dishes; saving of 10 minutes time; no waste of the product; no streaking of color; assurance of fresh flavor in a factory-sealed package.

Advantages and disadvantages

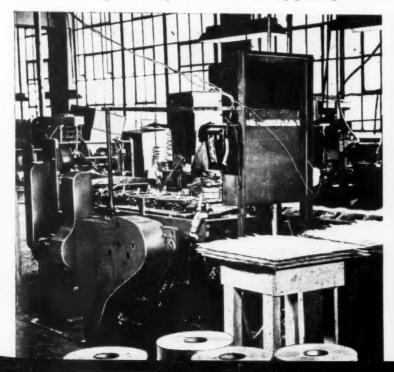
The bag has practical advantages for the margarine producer other than consumer appeal. According to Cudahy officials, the margarine keeps much better than in the conventional, loosely sealed carton and can be stored and transported with less fear of spoilage—although it is true that demand has been such that they have never been able to accumulate an inventory to actually test this point.

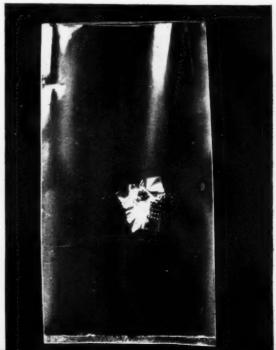
Also, the package has enabled Cudahy to process the margarine to a somewhat lower melting point, giving it improved spreading qualities and heightened palatability. With the product sealed within the pouch, it won't run out even at high temperatures.

Cudahy reports some minor trouble with bag breakage, but not enough to be serious. They say it is largely a matter of proper handling of the product in distribution channels—teaching clerks, for example, not to open cartons with sharp tools. In filling, the principal point is to watch for possible bag shrinkage (the film is rather susceptible to humidity changes) which might result in an underweight fill. All bags are inspected three times: after manufac- (Continued on page 286)

POUCH-FABRICATING machine, shown in action at Shellmar Corp., which supplies all users except Swift. Completely automatic, it forms pouch, attaches color patch to inside surface. Batteries of these machines operate at 3 plants to meet steadily growing demand.

CLOSE-UP OF POUCH as it leaves machine ready for filling. Note perforations in patch (abnormally wrinkled in this photo) which permit color to escape when the capsule is broken.







1. OVERWRAPPED BOX holding six apples was tested in Spokane marketing. It demonstrated good sales appeal, but some bruising of apples was observed. A semi-permeable type of film is believed most desirable. the

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Therever apple growers gather these days, packaging is certain to be one of the top subjects of discussion. Consumer preference for pre-packaging of fruits and vegetables generally—and of apples in particular—has been so conclusively demonstrated that the only question remaining for the apple growers is how best to go about it.

A survey made by the Washington State Apple Commission in the spring of 1946 showed that retailers generally wanted to secure pre-packaged apples and guessed that they could sell at 11/2 to 2 cents premium over bulk apples. A survey made by Fact Finders, Inc., for one of the large paper-bag manufacturers1 inquired of more than 2,000 consumers whether they would be willing to pay 1 cent more for the same quantity of produce in a package and 72% indicated a belief that the package would add value worth the additional 1

There has been more packaging activity lately in apples than in practically any other produce item, with the single notable exception of tomatoes. Apple growers have always been more conscious than most produce men of the value of a well-dressed product and they have close-knit organizations in the half-dozen principal apple states which keep them well informed on merchandising trends.

Nowhere is the apple grower more alert than in Washington State. Apples are not a side line in Washington; they are a major crop, as witness the fact



2. MESH BAG is a good package for cooking apples, but experts caution against its for soft apples of fancy grades. Use purple mesh heightens color appeal.

that there is a state commission to look after the interests of the growers. Washington apples are usually of a premium grade and they are shipped from that far corner of the nation to every market in the country.

The Washington State Apple Commission can be counted upon, therefore, to have complete and up-toWashington State gives serious study to

consumer packs that will best protect and

sell its famous product

the-minute information on consumer packaging of apples. During the last year the commission's Research Department, under Earl W. Carlsen, has concentrated on this subject. Rather than sponsor packaging directly, Carlsen has preferred to work with the shippers and act as a clearing house of information. There was, however, some direct market testing of consumer packages in Spokane in cooperation with Washington State College and some laboratory testing of packaging materials in relation to apples has been carried on by the Bureau of Plant Industry, Soils and Agricultural Engineering in Wenatchee. Without attempting to draw any final conclusions, the results of these activities have been summarized in a report which has been made by Mr. Carlsen.

In addition to its experimental testing of various foils and films, the Wenatchee laboratory gave superficial holding tests to some of the packages used in the Spokane experiment. The following comments are taken from the report:

"MST cellophane is a cellophane rather impervious to moisture and transmission of air. It runs the risk of preventing the escape of gases so that apples would develop a stale taste. In addition, if too much moisture is held in, the apples are more likely to develop mold. Packages of apples being shipped into humid climates with a moistureproof film such as MST cellophane would seem to be more subject to mold. Even though the brief tests that have been made show that MST cellophane developed no unsatisfactory effects on

the apple, its use on a package should be viewed with caution.

"LST cellophane retains some moisture and prevents some escape of gases. There is no experience to indicate that it could not be used on apples with fair satisfaction in the proper gauges.

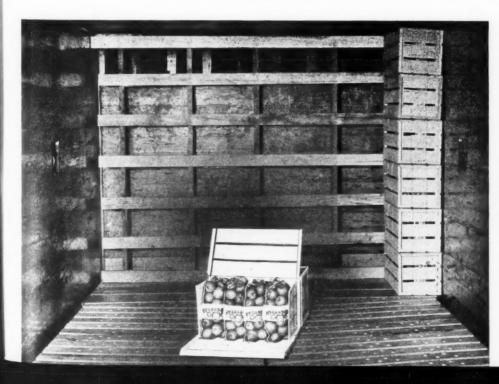
"Lumarith (acetate) is even more porous than the LST cellophane, allowing gases and moisture to move freely in and out of the package. It has the advantage of not showing accumulations of moisture inside the package; however, in a dry climate, the apples will be subjected to somewhat the same loss of moisture as loose apples.

"Pliofilm also has been tested. Of course, there are many types of Pliofilm which cannot be used on apples at all. There are, however, certain gauges of Pliofilm that can be recommended for apples to be held over a period of a few weeks; they give indication of being able to keep apples in a fresher condition. If Pliofilm is to be used on a package, one should be sure that a recommended film is being used."

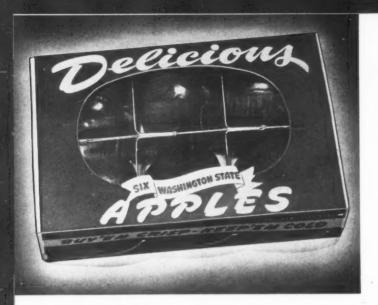
It is sometimes thought, the report states, that the overwrapping of apples in a package will develop bad flavors. This appears to depend, however, on the permeability of the film. Experience of tomato packers has indicated that where moistureproof cellophanes are used, holes should be punched in the film for ventilation. The respiration rate of apples is so different from that of tomatoes, the Washington researchers point out, that the two may not be exactly comparable. Some films, such as acetate, they say, are sufficiently porous to allow comparatively free passage of gases and moisture. On the other hand, the retention of moisture—if it can be accomplished without a deleterious effect on flavor—may be desirable. Further experience is needed.

The Spokane experiment

In the Spokane market tests, two types of packages were tried: cellophane bags and a rectangular overwrapped box. Films used were 300 MST cellophane,



3. PROTECTION by wirebound crate is indicated as desirable where mesh-bagged apples are shipped long distances.



4. WINDOW BOX devised for Los Angeles test resembles V-type egg carton, with each apple placed in a separate cell. This container gave excellent protection to fancy apples.

300 LST cellophane and acetate. Overwraps were made of each of these materials.

The cellophane bag, it was concluded, is not an adequate package for apples over long shipping distances unless a special type of shipping container can be developed. The overwrapped box (Fig. 1) was satisfactory in appearance, but some bruising occurred on the upper and lower surfaces of the apples and it appeared that reinforcement of cross supports in the shipping carton would be necessary.

Laboratory tests of the three overwrap materials indicated that all were satisfactory for the purpose. However, the opinion was expressed that under different humidity conditions in other sections of the country the MST cellophane might develop decay by holding too much moisture in the package.

Merchants in middle- and upper-income areas favored packaged apples much more strongly than those in low-income areas. Most consumers liked the packages, citing as their reasons (1) ease of purchase and (2) belief that apples in the packages were better. The latter point emphasizes one of the major conclusions of the entire Washington report: that pre-packaging of apples will be successful only so long as the quality of contents is kept consistently high.

Mesh bags

Reuben G. Benz, Yakima grower and a member of the Washington State Apple Commission, has gained considerable attention as an advocate of the mesh bag, a package which has proved successful for citrus fruits and other produce² and has been used for apples on a small scale for several years. Last season Mr. Benz shipped to the East, as well as the Pacific Coast, more than 400,000 5-lb. mesh bags of apples, comprising about 75 carloads. Reports are that the mesh bags (Fig. 2) were well received in the markets and particularly so when they were shipped in a wirebound

² See "Bagged Oranges," Modern Packaging, Oct., 1947, p. 108.

wooden crate (Fig. 3) for added protection in transit.

Experience indicates, however, that where the mesh bag is used, careful attention must be given to the variety and degree of ripeness of the apples packed, since there is little protection against bruising. The Winesap, a solid apple, is ideal for the mesh bag and is the chief variety shipped in this package. The early Jonathan is generally considered too soft for mesh bags, but Mr. Benz shipped some with fairly good success. The secret is to make sure that the apples are firm ripe, but not too ripe, when packed; most varieties of apples, when taken out of cold storage for shipment, ripen very quickly, and soft apples will cause trouble.

Trade sources indicate a belief that the mesh bag is most useful for dependable, firm, medium-priced apples, but not desirable for fancy quality such as the famous Washington Delicious, which customers expect to find more elaborately packaged.

The survey conducted by Fact Finders, Inc., contacting 790 self-service markets and 2,367 individual consumers, indicates that the mesh bag is the preferred package for apples of the cooking grade. The managers of the self-service markets expressed themselves as follows:

| Container | Preferred | package Per | |
|------------------------------------|-----------|----------------|--|
| | Number | cent | |
| Mesh bag at 3¢ | 296 | 37.5 | |
| Printed bag with cellophane window | | | |
| at 11/5¢ | 143 | 18.1 | |
| Printed paper bag at 1/2¢ | 69 | 8.7 | |
| Cellophane bag at 2¢ | 120 | 15.2 | |
| Cardboard box with window at 21/2¢ | 62 | 7.8 | |
| Cellophane-covered tray at 21/2¢ | 49 | 6.2 | |

It will be noted that the store managers voted for the mesh bag even though it was indicated to be the most expensive of the six types of packages.

In questioning of 2,367 consumers in 16 of the markets, the following results were obtained:

| | Preferred package | |
|--|-------------------|--------------------|
| Container | Per | |
| | Number | cent |
| Mesh bag | 843 | 35.6 |
| Transparent bag | 430 | 18.2 |
| Printed bag with transparent window | 341 | 14.4 |
| Cardboard box with transparent | | |
| window | 203 | 8.6 |
| Printed bag without window | 190 | 8.0 |
| Tray overwrapped with transparent | | |
| paper | 132 | 5.6 |
| Printed bag with transparent window Cardboard box with transparent window Printed bag without window Tray overwrapped with transparent | 341 203 190 | 14.4 8.6 8.0 |

Egg-type window carton

Independently of the state commission, several Washington shippers participated in test marketing last fall in the Los Angeles area using an experimental package developed for them by a produce-marketing consultant.³ This package (shown in Fig. 4) was a paper-

³ Franklin Gindick, Los Angeles. See "Produce Packaging: How and Where?" MODERN PACKAGING, Dec., 1947, p. 106.

board carton similar to a v-shaped egg carton, holding six apples in two rows separated by individual cells. The top of the package was cut out sufficiently for visibility of all six apples and a window of transparent film was used.

The condition of fruit in this package was reported excellent upon arrival and it was fairly well received in the trade; merchandising indications were inconclusive, however, due to the fact that many Los Angeles stores were troubled by a strike of retail clerks during the test period.

According to the Washington State Apple Commission report, the cost of this package appeared rather high, but it is understood that it is being revised to give greater visibility and use less paperboard.

The hammock package

The recently devised "Hammock-Pack" consists of two sheets of fibreboard with die-cut holes large enough to receive apples; apples are placed between two sheets of Pliofilm which are stretched over both cheeks of the apples, centering and suspending the apples in the die-cut openings of the fibreboard when the two sheets of board are pressed together. This "hanger" (Fig. 5) usually contains six apples and has a die-cut handle at the top for carrying. Small quantities of this package were used in Washington to test consumer and retailer reaction.

This package, says the commission report, "had a very desirable appearance, but as yet no master container has been devised to prevent bruising in transit. Whereas the ability of Pliofilm to hold apples over a long period of time may not be completely tested out, it is fairly certain that the proper gauges will hold apples long enough to market consumer packages. There is a possibility that the life of apples can be increased with a Pliofilm wrap."

The package cannot be put into commercial production, the report points out, until a machine has been perfected for the packing operation; hand packing, it says, is slow and wasteful of materials.

"The merchants," says the report, "generally reacted favorably to the pack. It can make a beautiful display; however, it is not very well adapted to the bulk type of display which is now prevalent in many large retail stores.

"Consumers generally approved of the package, although no definite survey of consumer opinion was made. The novelty value of the package is so great that a true consumer reaction might not be obtained without waiting to learn the extent of repeat sales.

Whether consumers will be willing to use the pack as a carry-out unit needs to be questioned, since the apples appear to be quite exposed."

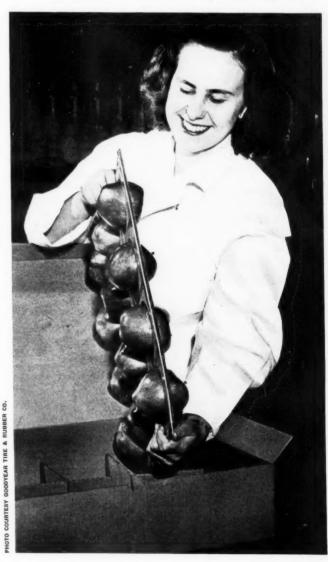
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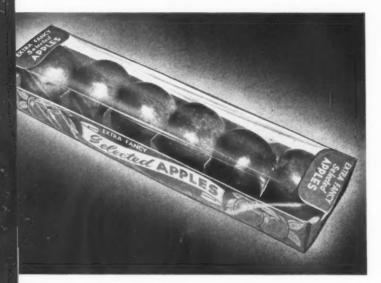
A major difficulty that has tended to slow down the entire development of pre-packaged apples, observes the Washington report, is the inability to secure any one package that is adaptable to the wide range of sizes of apples and at the same time will fit into a uniform master container.

A package that takes only a small range of sizes breaks up the shipper's inventory of sizes. If several packages are used, so that the full range of sizes can be taken, a large inventory of materials must be kept on hand and different-sized master containers must be used, complicating handling in the warehouse and in loading cars. Those types of packages that can take a range of sizes, such as the mesh bag, have a distinct advantage. It is not likely that other types of packages will be developed without considerable experimental testing, due to the size and container problem.

It is possible that the viewpoint of shippers who are thinking of consumer packaging may be affected by the necessity the industry has had of closely sizing apples in order to turn out a good standard pack. Evidence discernible in consumer reaction to sizes indicated that many factors having to do with quality are much more

5. HAMMOCK PACK with Pliofilm had strong novelty appeal, but Commission observes that it will not be practical until a machine is devised to handle the packing operation.





6. TOMATO TRAY adapted to apples, with paperboard dividers. Respiration rates of apples differ and it has been suggested that there be further research on film permeabilities.

important than size. With consumer packaging, it may be possible to save a little expense by not sizing as closely as with the standard pack.

Cost of pre-packaging

None of the Washington packaging operations on apples has been conducted on the scale that would permit a very accurate calculation of cost of packaging. Undoubtedly, says the report, it may at first increase costs; in the end, it is conceivable that costs may even be reduced, particularly if the packaging operations and design of the package are given forethought with a view to adapting the process to machine operations.

Factors tending to make pre-packaging more expensive than the standard pack are the costs of the consumer containers and additional labor cost in filling the packages. Another increased cost will be through possible extra handling in order to accumulate the apples from the sizing tubs in which they are handled for delivery to a packaging table.

Among items tending to reduce costs of pre-packaging would be savings on wraps and box liners, along with the labor of wrapping. The shipping container for consumer packages may not have to be as heavy as the standard box and, therefore, could cos less. One other way in which packaging costs might be reduced when apples are pre-packaged is that fewer bruised apples will be delivered to the retailer, so that wastage will be reduced, making the retailer's cost of operation less. Theoretically, this would eventually be reflected in the grower's prices.

Where should packaging be done?

Assuming that pre-packaging of apples proves to be desirable from all standpoints, there remains the question of whether the packaging should be done at the shipping point or at the terminal market. The Wash-

ington report devotes considerable space to discussion of this question, which will have to be settled before the development can proceed much further.

It says there is general agreement by produce merchandisers and researchers that, for the present, highly perishable items had best be packaged close to the retail point in order to make sure that only fresh, quality produce gets to the consumer; but that the less perishable produce items can be successfully packaged at the shipping point. Oranges and potatoes, customarily consumer-bagged by the shipper, are examples of the latter. Whether apples are as hardy as oranges and potatoes remains to be seen.

If apples are pre-packaged at the terminal markets, a method must be devised for economically shipping apples to the terminal markets with the minimum of rehandling. On the surface, it would seem that two packaging costs would be involved. Pre-packaging at the shipping point, however, also may involve extra handling to fit the packaging operation into the line-up of present washing and sizing equipment.

Packaging close to retail outlets tends to protect the quality of the package contents, because the whole-saler's or retailer's interest in the brand name induces him to handle the package efficiently and promptly.

At the shipping point it hardly seems likely that the package could be packed by a shipper for sale to any buyer or speculator, at least in the early stages of packaging development, because the buyer might have no extra inducement to protect the brand name. Rather, it seems logical that the packaging will tend to be done on a contractual basis or packaged to order. In this way, the packaged apples are not apt to be held so long that deterioration will develop before the apples are consumed. With such arrangements between buyers and sellers, it is likely that pre-packaging will call for closer working relationships between suppliers of apples and the distributors at terminal markets. This close relationship may have an advantage of lending stability to the industry and will favor the delivery of fruit in better condition.

Quality is paramount

Whatever the developments, the report concludes, experience will emphasize one simple truth again and again: The quality of the product is more important than the package. Consumers expect to find better apples in consumer packages. The biggest drawbacks to pre-packaging are the difficulty of assuring quality in the package and the possibility that packages may not allow for as attractive a display as bulk and pyramid displays of loose apples, which, it is felt, may have an effect on purchases of apples by impulse.

Failure to maintain quality in the package can build up adverse consumer and trade reaction, which will be associated much more closely with a brand name than has been the case with bulk apples, the growers believe. If packages bring about better handling or can protect the apples to withstand lax handling, the present trend to pre-packaging can be permanent. sh

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EASY TO APPLY, the wraparound pricers are shown latched through die-cut slots in back and dropped over the container. Two successful uses are for Dole pineapple and Dale coffee.

WRAP-AROUND PRICER

New device with die-cut header makes a mass display, but

takes up no space other than that of the package surface

As display space in the modern food store becomes more and more limited, the manufacturer must rely more heavily on mass arrangement of his packages to attract the shopper's eye.

A new kind of device that gets attention for counter, shelf and island arrangements of packages is the wrap-around pricer recently adopted by Hawaiian Pineapple Co., to promote its improved pack of Dole crushed pineapple and also by Dale Bros. for its Supreme Brand of coffee.

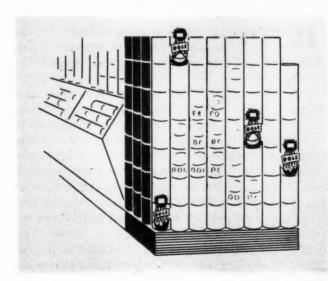
This device, produced on regular label stock on label forms, varnished and die-cut, offers an effective new display aid in any type of store, small or super, requiring no display space other than the surface of a package around which it is wrapped. Spotted on several packages throughout a mass arrangement, a few of these wrap-arounds can be used to integrate a whole group of packages into a mass panorama with special accent on price or other selling points the manufacturer wishes to get across to the shopper.

All of the wrap-around pricers are printed in full color, each with a large white patch for the grocer to write in the current price. Hawaiian Pineapple Co. uses one type of wrap-around with a large color illustration of a whole pineapple, effective because the die-cut section showing the green leaves extends above the top of the can, thereby creating the realistic appearance of a whole pineapple in third dimension. The

same die-cut effect is used for the wrap-around used on Dole crushed pineapple, with an additional element of a mouth-watering illustration of ice cream topped with crushed pineapple.

Human interest is added to the Dale Coffee wraparounds by the die-cut illustration of a hooded epicure sipping a cup of coffee and (Continued on page 268)

SPOTTED in mass arrangements as shown here, wrap-around pricers integrate display panorama.



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SIDE-SEAM OPENING

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A simple change in directions obviates hazard of spilling and enhances utility of fibre-metal can for packaging frozen foods



TO OPEN THAW AS DIRECTED . . INSERT TABLE KNIFE UNDER FLAP AT ARROW . . PRY OPEN LENGTH OF PACKAGE

BIRDS EYE introduces the new side-opening technique for fibre metal-end cans with the labeling shown above on rhubarb cans. Directions and diagrams showing the three steps recommended by the container manufacturer for opening the can by this new method are shown by the photostat below. Container structure, at present, remains the same.

Birds Eye-Snider Division, General Foods, becomes the first frozen-food packer to introduce to consumers a new method of opening the popular fibre metal-end can.

Starting with the 1948 pack of Birds Eye frozen rhubarb, users will be instructed—through revised labeling with diagrammatic directions—to open up the side seam by prying up with a knife, instead of attempting to cut off or pry off the top of the container. Simple as this change may seem, it is expected to be vitally important in overcoming the difficulty which some consumers have reported in spilling the defrosted contents of the package when attempting to open it in the manner previously recommended.

For the present, no structural change in the container is required, since it has been found that with a

little practice it is entirely practicable to insert a blunt table knife at one end of the overlapping side seam of the fibre body and run the knife the length of the seam; with slight prying pressure as the knife travels along under the upper flap, the flap is loosened so that it and the lower flap both can be folded back and the package contents poured into a dish or pan without the possibility of spilling.

The ends of the side wall can be pulled free of the crimped metal ends without too much difficulty, it is said.

Later, the manufacturer of the container contemplates minor structural modifications that will facilitate this improved method of opening. The adhesive applicator on the package-making machinery will be relocated to permit a slight (1/16 in.) non-adhesive

surface at the edge of the overlapping flap, which will make it easier to insert the knife. Then, as soon as new machinery can be built, the manufacturer will score the under surface of the upper flap of the body blank so that it can be easily separated from the lower flap and folded back evenly. Continued use of the overlapping seal on the side seam will assure the packers that the contents, even when thawed, will not leak through that seam, it is said.

The earlier directions for opening the container, given on the package, instructed the user to pry off one of the metal ends with either a hook-type can opener or a knife.

An alternate means of opening was that the package be cut through below the metal end with a knife. The end of the package where it could be opened by prying or cutting was indicated by a large arrow on the package side panel.

The new directions on the side panel of the Birds

Although the original opening method was trialtested by users with apparent satisfaction, as the package was used more and more widely it was discovered that there were too many possibilities for error to occur.

Part of the difficulty was due to other instructions on the package concerning the general preparation of frozen foods which directed users to let the package contents thaw in the unopened container. This was particularly the case in the directions for many frozen fruits, since if they were exposed to air during the defrosting period browning would occur and the user would find the fruit unattractive.

However, if the package contents were thawed in the unopened container, in many instances the user spilled the fruit or liquid when the opening was made at the end, whether the package rested on its side during the operation or tipped slightly when held in an upright position. The thawed strawberries and syrup poured



OPENING of the container is easily effected by following the directions outlined on the package: insert a knife at one end, slide it along the side seam, then pry up. The crimped metal ends of the can will then come free readily.



FLAPS FOLDED BACK, contents of package, whether thawed or still frozen, may easily be removed without spilling. Later the flaps of the can will be scored and the glue seam changed to make opening still easier.

Eye package still indicate the spot where the knife is to be inserted. But instead of an arrow pointing to the metal end a series of white arrows has been placed in a narrow blue band on the lower flap pointing to the edge of the side seam, as can be seen in the illustration. Printed directions are given immediately above in white letters on a red band.

On the stock containers, the manufacturer has suggested using three diagrams instead of the two used on the Birds Eye package to show each of the three steps—inserting, prying, folding—to complete it. On the lower flap of the side, printed opening instructions read, "To Open—Thaw as directed...Insert table knife under flap at arrow...Pry open length of package." Both the arrow and a color spot under the words "To Open" appear in reverse.

out, or the green peas scattered over the kitchen table and the user was antagonized.

With the new side opening, the package contents can be removed without difficulty whether thawed or still frozen. If thawed, the contents can be poured and if still frozen, the entire block slips out of the wide mouth formed by opening up the entire side. The package, when held in the horizontal opening position, allows the user to get a firm grip on it and no tipping is necessary, since less pressure is used for opening the side seam than when prying or cutting off the metal end. During the lifting up of the top flap, the contents are still almost completely covered until the flaps are folded back.

CREDIT: Containers, American Can Co., New York.

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Oscar Mayer Co., Chicago meat packers, are testmarketing a new package of liver sausage made of Pliofilm which offers new consumer convenience and is said to protect flavor longer and to retain the moisture better under refrigeration than the former package. The individual 12-oz. liver-sausage package is designed so that the housewife need only cut the string at either end of the roll to open it. A red and yellow wraparound printed paper label has the back panel devoted to three diagrammatic illustrations showing how to open the casing.

A slight squeeze on the closed end of the casing pushes the sausage out so it can be sliced. By simply pushing the sausage back into the casing and twisting the loose ends of Pliofilm, the casing may be reclosed for later serving.

CREDITS: Pliofilm, The Goodyear Tire & Rubber Co., Akron, Ohio. Labels, Shuman Labels, Chicago, Ill.

HIGH-GLOSS LABELS TO TELL A QUALITY STORY



Operated by the same family since its founding in 1841, H. H. Claussen's Sons, Inc., with headquarters in Atlanta, Ga., enjoys an enviable reputation for quality baked goods. Claussen's recently decided new labels for its cakes and rolls were necessary to meet competition, the most important factor in the new design was to stress this reputation. High-gloss, thermoplastic-coated roll stock was selected for quality appeal to match the trim appearance of the baked goods automatically wrapped in cellophane and for application by the company's modern thermoplastic labeling equipment. Color schemes used for the most famous items in the line now tie different items into related groups, providing easy identification. Pictorial "suggestions for use" are featured on sponge-cake cups.

CREDIT: Labels, Miller & Miller, Inc., Atlanta, Ga.

HISTORIES

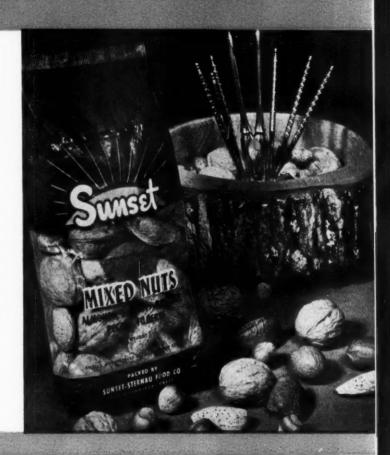
QUICK-SELLING NUTS

The inherent attractiveness of various shaped and colored nuts is effectively displayed in the new, double-thick cellophane 1-lb. bags introduced for Sunset Sternau Foods' Sunset brand of California almonds and mixed nuts.

The package and its design are the result of a survey made of competitive brands of pre-packaged unshelled nuts. Since pre-packaged nuts are strong impulse-buying items, the transparent package with its gold and blue design was decided upon as most suitable and appealing.

The new package gives the nuts a high degree of visibility. The brand name is outlined against the sunset motif in the center of the bag. Item and company name appear below. Coordinated package designs for Sunset Sternau's other nut products are now being made.

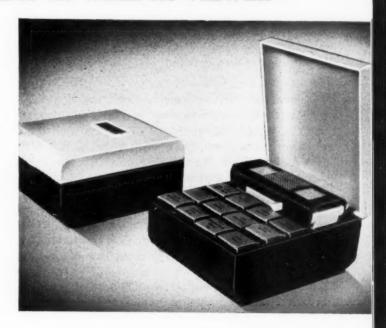
CREDITS: Design, Raymond L. Sines & Associates, San Francisco. Packages, Shellmar Products Corp., Mt. Vernon, Ohio.



"LIBRARY CASE" SELL FILMS AS WELL AS VIEWER

Tru-Vue is a modern version of the old-fashioned stereoscope, sold with any selection of 400 films. The merchandising problem, therefore, is to sell films. This plastic "library case" is a smart packaging idea that accomplishes the sale of the viewer with 12 films at one clip. Case is designed so that the viewer may be put either right-side or wrong-side up, without damage. A false bottom raises the films to the same level as the viewer. Ribs between the film cartons are kept to a minimum height so that opened cases present an attractive display, but still hold film cartons steady during shipment. Case top is molded of ivory-colored urea and the bottom of brown phenolic.

CREDITS: Design, Mast Development Co., Davenport, Iowa. Case molded by General Electric Co., Pittsfield, Mass., of urea and phenolic supplied by Plaskon Div., Libbey-Owens-Ford Glass Co., Toledo, Ohio.



ALUMINUM CANS

They are no novelty in Norway, where experience has demonstrated both their advantages and their limitations for meat, fish and vegetables.

By D. NICKELSEN*



DRAWN ALUMINUM CANS, with seamed top ends, are used in Norway in a variety of different sizes and shapes for a wide range of food products. Silvery whiteness of the metal adds to their sales appeal, the Norwegian canners say.

A luminum—that light and pleasant looking metal—is readily rolled to sheet and strip of adequate tempers suitable for drawing of cans of different types and sizes in one single operation. Although it is little used for canning in the United States, it is now being regularly used for that purpose in Norway.

Cans with heights less than 50% of the diameter are stamped in ordinary presses, whereas higher cans, as the ordinary packer's can, are produced by the Keller method. This method uses a circular blank which is drawn to a container through a number of drawing rings in one stroke.

Norwegian canners adopted aluminum after extensive investigation showed that aluminum cans were not only suitable for a number of export products, but in some cases actually superior to tinplate cans previously used for the same purpose. In addition, aluminum is

abundantly produced in Norway, while tin and tinplate must be imported for the manufacture of tinplate cans.

Many Norwegian products have a short shelf life in non-lacquered timplate cans and they can be kept in lacquered cans for only a limited period. In lacquered and non-lacquered cans, foods may react with the cans and blacken them. At the same time, a metallic and unpleasant flavor may be given to the product.

Plain aluminum has been found very resistant to different foodstuffs, but where necessary an improved resistance against corrosion is obtained by anodizing, which provides a strengthening of the natural surface film. Lacquering or combined methods may serve the same purpose.

Advantages of aluminum cans

Starting in 1932, the director of the Laboratory of the Norwegian Canning Industry carried out a series of inv

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^{*} A/S Nordisk Aluminiumindustri, Oslo, Norway.

investigations with Norwegian export products packed in aluminum and tinplate cans, respectively, including taste tests by experts on canned goods. In conclusion, the following qualities were claimed for the aluminum can:

- 1. No blackening of the cans.
- 2. No metallic scent or taste.
- 3. No solution of detrimental metal in the goods.
- 4. Easy opening of the cans.
- 5. Lighter weight of the cans.

These qualities still hold true. Many kinds of food, including meat products, fish products and vegetables, retain the natural flavor excellently in aluminum cans. Sardines in oil, kippered herring, cod roe and liver paste, shrimps and crabs, fish balls, peas and beans, etc., show superior quality when packed in aluminum cans. Meat conserves packed in plain aluminum cans for the Swedish Army and stored for three years were given preference for quality reasons. Comprehensive tests conducted in Denmark with different food products indicated that 80% of the products had better taste and flavor when packed in aluminum cans. In Denmark, shrimps have preferably been packed in aluminum cans for many years and Swiss producers of condensed milk, using anodized aluminum cans, also claim better quality for their product.

It has been established that aluminum is harmless to vitamins and has no detrimental influence on health. Numerous investigations by scientific institutes and health departments confirm this statement. "A Select Annotated Bibliography of the Hygienic Aspect of Aluminum and Aluminum Utensils," published by the Mellon Institute of Industrial Research in 1933, contains these conclusions:

1. Aluminum is not a poisonous metal and does not give rise to any disease.

PACKING OF SARDINES in cans is a hand operation.



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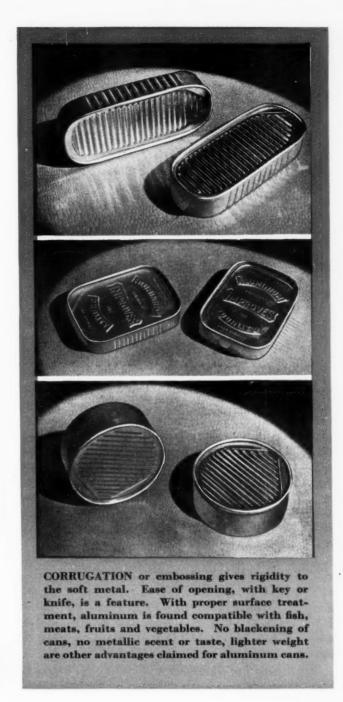
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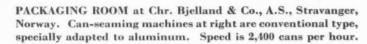


2. Aluminum utensils are very resistant to corrosion by foodstuffs cooked therein.

 Aluminum does not accelerate the destruction of vitamins and other food-accessory substances during cooking.

The Laboratory of the Norwegian Canning Industry has made fundamental research in this field. Their investigations showed that the quantity of aluminum dissolved in three-year-old conserves taken from unprotected aluminum cans was about the same as traceable in foodstuffs cooked in aluminum kitchen utensils. Feeding tests with rats showed no accumulation of aluminum in the animals and their growth was normal when fed with 5,000 mg. of canned food per day containing 0.4 mg. of aluminum. In another test, rats







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OVERWRAPPING in paper, with key enclosed, is the customary manner of packaging flat sardine cans in Norway. This, too, is an operation done by hand.

were fed up to the fifth generation on four-year-old canned food from unprotected aluminum containers. No injurious effect was found. Growth was just as rapid in the last as in the first generation and equaled the growth of the control groups fed on ordinary stock diet and on food canned in other metals. Determination of the aluminum content of a rat's lungs, heart, spleen, kidney, liver and muscle tissue showed that no accumulation or retention of aluminum had taken place. Packed in anodized or lacquered aluminum cans, food-stuffs evidently will contain only negligible amounts of dissolved metal.

The aluminum can is very easy to open. Norwegian sardine cans, which are seamed rather than soldered, are supplied with a lip and a key which opens the lid along a weakening line as easily as winding a watch. If no key is at hand, aluminum cans may be opened easily with a pocket knife. The easy opening is a strong sales point.

One hundred sardine cans of aluminum weigh 4 kg. less than a corresponding number of tinplate cans. This fact saves freight costs and also makes handling easier.

The aluminum cans may be given special design features, such as corrugation or embossing or impressed trademarks and text, and this advantage, together with the eye appeal of the silver-white can is of importance in merchandising.

Corrosion and surface protection

As indicated, plain aluminum cans are sufficiently resistant to be used for a number of sterilized food products. Experience has shown, however, that a surface protection of the metal is preferable or even necessary in most cases, except for kippered herrings, which are packed with success in cans fabricated from an unprotected aluminum alloy containing $1^1/4\%$ of manganese. To obtain adequate protection for other Norwegian

products, cans are stamped from anodized coiled sheet and such cans are entirely satisfactory for a whole range of food products.

The attack of foodstuffs on aluminum is dependent on the pH value as well as the characteristics of the acids and salts present in the food. Fish and meat products, showing pH values from about 6.0 to 7.0, and shrimps, crab, etc., with a pH from 7.0 to 7.5, are usually packed in anodized cans. Vegetables, with pH values from 4.5 to 6.0, are packed partly in anodized cans and partly in cans fabricated from anodized and roll-lacquered strip, or from roll-lacquered material only.

For fruits and berries in sugar syrup, with pH figures of from 2.4 to 4.0, it is at the present moment necessary to use spray-lacquered cans. Different kinds of jam, however, do not attack aluminum as readily as fruit and berries, on account of a greater viscosity. Table I shows the results obtained with different types of surface treatment of aluminum cans when used as containers for different fruits.

TABLE I—STORAGE LIFE OF FRUIT IN ALUMINUM

| 0.1110 | | | | |
|--------------------------------|------------|---------------------------|--------|--|
| | Storage | Storage life in months at | | |
| | 37° C. | 22° C. | 15° C. | |
| Plums in 50% s | ugar syrup | | | |
| Unlacquered, anodized cans | | 1.5 | 6.0 | |
| Roll-lacquered, anodized cans | 0.75 | 3.0 | 8.0 | |
| Spray-lacquered, anodized cans | 3.0 | 5.0 | 20.0 | |
| Pears in 40% s | ugar syrup | | | |
| Unlacquered, anodized cans | 1.5 | 4.0 | 11.0 | |
| Roll-lacquered, anodized cans | 3.0 | 8.0 | 26.0 | |
| Spray-lacquered, anodized cans | 17.0 | >30.0 | >30.0 | |

 $[\]ast$ From "Corrosion of Containers for Canned Foods," Finn Jakobsen and Erling Mathiesen, Oslo, 1946.

The results are, of course, much dependent on the quality of the lacquer and its adhesion to the inner surfaces of the can and considerably better results may be

expected with recently developed synthetic lacquers.

Attack of foodstuffs on aluminum leads to evolution of hydrogen and the storage time quoted in Tables I and II means in all cases the time elapsed until a faint swelling of the can is detected, caused by a slight insidegas pressure. This evolution of hydrogen is absolutely harmless, but the cans will become unsalable, as a slightly blown can normally is an indication of bacterial infection.

TABLE II—STORAGE CAPACITY OF FOOD PRODUCTS IN ALUMINUM CONTAINERS

| Product | Can material | Storage time |
|---|----------------------------------|----------------------------|
| Brisling in oil | Anodized 2S | Several years |
| Musse (sild) in oil | Anodized 2S | Several years |
| Unsmoked sardines | Anodized 2S | Several years |
| Fresh fish filets | Anodized 2S | Several years |
| Fish balls | Anodized 2S | Several years |
| Fish cakes | Anodized 2S | Several years |
| Cod roe | Anodized 2S | Several years |
| Cod liver | Anodized 2S | Several years |
| Mussels, stewed or natural | Anodized 2S | Several years |
| Crab, stewed or natural | Anodized 2S | Several years |
| Shrimps | Anodized 2S | Several years |
| Peas | Anodized 2S | Several years |
| Mushrooms | Anodized 2S | Several years |
| Blood pudding | Anodized 2S | Several years |
| Liver paste | Anodized 2S | Several years |
| Unsweetened condensed milk | Anodized 2S | Up to 2 years |
| Sweetened condensed milk | Unprotected 2S | Several years |
| Brisling in tomato | Roll - lacquered, | Approx. 2 years |
| Driening in contact | anodized 2S | represe - Jesse |
| Musse (sild) in tomato | Roll - lacquered, | Approx. 2 years |
| | anodized 2S | |
| Kippered herring | Unprotected 3S | 2-3 years |
| | | Are packed on |
| | | an industrial |
| Carrots | Anodized 2S | scale. Must |
| Cauliflower | Anodized 2S | presumably |
| Parsnip | Anodized 2S | be packed in |
| Beans | Anodized 2S | roll-lacquered |
| String Peas | Anodized 2S | anodized 2S to |
| Meat cakes | Anodized 2S | obtain quite |
| Ox-beef | Anodized 2S | satisfactory |
| | | results |
| Anchovies | Roll - lacquered, | |
| | anodized 2S | Industrial trials |
| "Gaffelbiter" | Roll - lacquered, | promising |
| | anodized 2S | } |
| Asparagus | Roll - lacquered, | |
| | anodized 2S | |
| Kale | Roll - lacquered, | |
| | anodized 2S | Must be packed |
| Caraway (with addition of CaCl ₂) | Roll - lacquered, anodized 2S | in lacquered material. The |
| Spinach (with addition of | Roll - lacquered, | length of |
| CaCl ₂) | anodized 2S | storage time |
| Parsley (dependent on bleaching agents) | Roll-lacquered, anodized 2S | somewhat variable |
| Celery (dependent on | Roll-lacquered, | V GI AGDIO |
| bleaching agents) | anodized 2S | |
| Mutton | Roll-lacquered, | |
| | anodized 2S | |
| | anodized 20 |) |

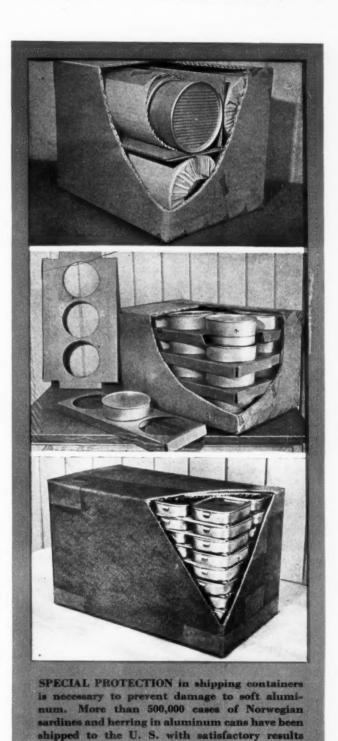
Fruit, berries and jam: Packed in spray-lacquered, anodized 2S.
Usually very good results.

Fruit, berries and jam: Packed in roll-lacquered, anodized 2S. Special kinds promising.

According to a Norwegian patent, the pH value of

foodstuffs to be packed in aluminum cans may be increased through adequate additions, thus avoiding the use of lacquered cans. Unfortunately, the taste is influenced in most cases and the use of pH regulators is, therefore, in general no practical solution. In special cases, as with spinach, the attack may be reduced by addition of calcium salts.

If a foodstuff is to be packed in aluminum cans, the pH value and the determination of acids and salts present may give an indication (Continued on page 274)



and the saving in weight is considerable. The

cans are packed in paperboard and wooden boxes.

G



WIDE VARIETY of bottle sizes and shapes is handled by new capping machine. Lead foil secondary seal goes over CT-RO aluminum wine-bottle closure.

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ROLL-ON CAPPER

Taylor Wine uses an improved three-head machine that applies

aluminum closures hermetically tight at a speed of one a second

ost wineries are reluctant to give up the traditional friction cork stopper, feeling that the traditional "old" look of the wine package is more important than convenience in opening. But ever since Repeal, the Taylor Wine Co., Hammondsport, N. Y., a 68-year-old concern has used the strictly modern rolled-on, continuous-thread aluminum cap.

Now Taylor backs up its belief in this modern type of closure by becoming the first winery in the country to use a new and improved type of machine for applying the CT-RO aluminum closure.

The new three-head continuous capping machine speeds up production of the filling line to between 55 and 60 four-fifth-quart bottles per minute and is adaptable to many shapes and types of bottles—an important point when you consider that Taylor has 12 different varieties of table wines, each in a distinctive bottle. It replaces the older and slower type of intermittent motion machine.

Since Taylor produces between 500,000 and 600,000 gallons of wine each year from grapes grown on its own vineyards and those of a hundred neighboring growers, continuous capping equipment with a very low breakage rate was essential. The new capping machine fulfills this requirement, Taylor officials say.

Wine bottles of various sizes can be accommodated in the new machine by means of various center-guide and star-adapter combinations for bottles as small as $2^{1}/_{2}$ in. to as high as 14 in., and up to 4 in. in diameter. The machine will have wide application in fields other than wineries. It can be adapted to handle many varieties of aluminum rolled-on closures.

At Taylor, column supports have been designed to take care of capping bottles 4, 9 and 14 in. high, while still keeping the over-all height of the machine as low as possible.

As the bottles are timed and fed into the machine by a screw-feed mechanism, they are automatically transferred to star-adapters and carried into the cap-forming position in a rotary motion which eliminates spillage. As each bottle comes under the sealing device, aluminum rolled-on caps 28 mm. thick, with a cap liner already inside, drop down from their magazine into the sealer. They are held on the bottle under pressure while spinning rollers brought in from the side accurately form the metal around the glass threads.

One of the advantages of the rolled-on cap, of course, is that the molded threads on each bottle actually act as a matrix for the aluminum cap, which assures each bottle a "custom" fit. The rolled-on capping process permits uniformly correct sealing compression of the nonporous cap liner, which effects the positive vacuum seal necessary to prevent any leakage or breathing. The new machine is said to have completely eliminated

he latter difficulty in the Taylor bottling operation.

One of the reasons the Taylor Wine Co. has favored the rolled-on aluminum closures for the past 15 years is because of that metal's high resistance to chemical attack and its complete non-toxicity—bugaboos for all wineries. The bottling operation is, of course, done under scrupulously clean conditions at the Hammondsport plant. Every possible precaution is taken to guarantee wine reaching the table in top condition.

The motor for the hopper drive on the capping machine is a special gear-reducing type (1/20 h.p., 1,725 r.p.m.) with an approximate 50 r.p.m. output. Both it and the drive shaft are mounted on top of the equipment so that water, steam or any grease cannot get into the drive gearing. All the moving parts are amply protected by ball bearings or bushings, to reduce wear.

Once the bottles start through the Taylor filling and bottling line, they are seldom touched by workers. They start out by going through a case unscrambler which is equipped with a straight front feed. Next, through an automatic inverted air cleaner and, still moving along on the conveyor, the bottles go to a rotary gravity filler with 18 filling spindles which meas-

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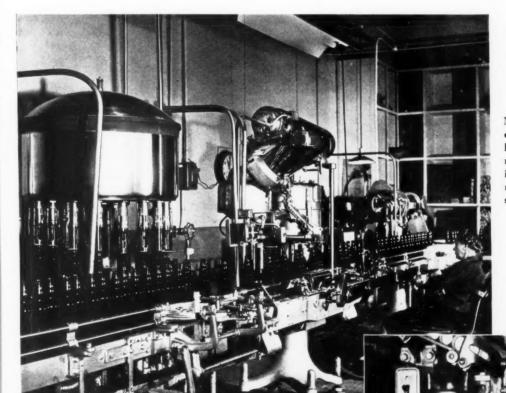
ure a precise volume of wine into each bottle as it travels around. The wine is automatically pumped from bulk storage tanks into the filler.

After the bottles have been capped by the new machine, they continue along the conveyor to stations at which the bottle label is attached by an automatic rotary labeler and a secondary seal of embossed lead foil is applied over the cap. Finally a belt conveyor takes the filled, capped and labeled bottles to the packing and shipping department.

Says Greyton Taylor, a descendant of Taylor Wine's founder: "We feel that the aluminum closure is well adapted to wine. Under the distribution-control system used by the various states, wine is certainly destined to become a home beverage. Consumers, particularly housewives, aren't satisfied with the difficulties encountered in removing corks. Our experi-

ence has confirmed this."

CREDITS: Model RR capper and aluminum closures, Aluminum Seal Co., Richmond, Ind. Filler and case unscrambler, Horix Mfg. Co., Pittsburgh. Bottle cleaner, Pneumatic Scale Corp., Ltd., North Quincy, Mass. Labeler, Economic Machinery Co., Worcester, Mass. Bell conveyor table, Lamson Corp., Syracuse, N. Y.

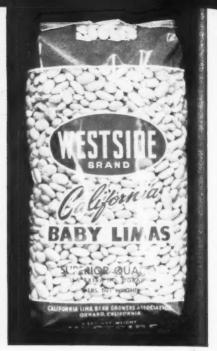


NEW CAPPER appears in the center of the Taylor bottling line. At left is an 18-spindle rotary gravity filler. Operator inspects filled bottles through magnifying lens against lighted screen as they leave the capper.

MOVEMENT is rotary, counter-clockwise, through the new three-head capper. An unthreaded aluminum cap drops from magazine at upper left as each bottle comes under the sealing device and is held on the bottle under controlled pressure while a series of spinning rollers accurately mold the metal around the bottle threads.







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IDENTIFYING baker symbol on Sunshine Biscuit Co. bag emphasizes visual recognition element in package design. Repetition of familiar signs reassures buyers.

BACKGROUND for brand name should "lift" the type out of product background to insure easy reading. Transparent bag for Kraft Dairy Fresh caramels was designed with this requirement in mind.

CLEAR, BRILLIANT colors such as red and white used on Westside lima bean bag should be used for mass market. Pale colors are more sophisticated.

DESIGN FOR IMPACT

A leading converter gives some tips on merchandising possibilities

of printed transparent bags and wraps.

By JOHN M. COWAN*

prime function of your package is that of a silent salesman in the store. To get over its message, it must be seen. You want your package to be noticed on display. You want it to have "impact" on customers and prospects. You want it to attract active, favorable attention. You want it to tempt people to pick it up, to examine it, to buy. That's the ultimate purpose of packaging—to make sales.

The package's influence starts even before Mrs. Housewife picks it out on counter or display. The jobber and the dealer have to be convinced that the product, the price and the package are right and that it will sell in reasonable volume.

The package must physically hold the product and deliver it intact to the ultimate user, but unless it goes farther down the sales road, great opportunities are being overlooked.

Selection of material

Among flexible packaging materials, there are literally hundreds of choices. If your products, facilities

* Manager for Market Development, The Dobeckmun Co., Cleveland-Ohio.

and marketing strategy permit the adoption of some type of transparent film, you start off with proved popular appeal which has helped thousands of products to new sales volume and profits.

Let's assume your choice is cellophane in the form of bags. Naturally, the same principles which apply to transparent-bag design are effective on transparent wraps. To give your product a distinguishing appearance from similar competing products and to carry an adequate selling story requires some type of printing on the bag. Too often the design and color scheme formerly used on an opaque package is slavishly reproduced on cellophane without considering whether a new approach might not be far more effective.

When the Kraft Caramel bag was paper, it was simply printed in a repeat design with the words "Kraft Dairy Fresh Caramels." For the cellophane bag, a completely new design was created. The lace doily effect in white adds to feminine interest in design and sets off the brand name to advantage. The House of Merrick trademark was enlarged for their transparent marshmallow-bag display panel, thus permitting cleaner

printing and more emphasis on the trademark design.

When cellophane is used, the color of the product becomes the background color of the package itself. Design elements which may be scattered around on an opaque background are held together by the paper or boxboard colors. On cellophane, however, small type floating against a broken up background of the product is lost and illegible.

The answer is to mass the type elements on one or more panels in contrasting colors. These background panels may be any shape and generally are lighter in color than the type matter. When a brand name or trademark is used by itself, a color outline should be placed behind the type. This outline should be thick enough to lift the type out of the product background at normal viewing distance. This insures better legibility. The illustrations show several applications of this design requirement for effective transparent bag treatment.

Your package can be considered as a miniature bill-board. Good clean design and printing can make it a poster consumers can't ignore.

All of us are picture minded. Endeavor to play up some design element or symbol or color panel so that it is readily remembered. This approach also helps to develop a unique appearance. For instance, you will notice that on the Sunshine marshmallow-puff bag, the identifying baker trademark appears on both top and bottom of the display panel. The Merrick bag design, already mentioned, encourages ready recognition by repeated use of Old German script for the name picked up from the trademark lettering.

Choice of color, shape and proportions

Products for the mass market should use the clean, bright colors which are characteristic of all primitive art. Muddy, dark or pale pastel colors appeal to a more sophisticated audience. Fortunately, colors available in cellophane printing inks are especially bright and vibrant. The ever popular red-and-white colors are used on the Westside lima beans. Careful grading of the beans and full transparency put over the story of quality and sanitation instantly.

On paper bags or boxes, white is usually the inherent color. Since transparent films are colorless, even white must be printed. Printing on film is accomplished by one run through the press whether one or six colors are used. Because all printing is done in rolls, a second or third color does not add much to the cost and is almost always justified by the improvement in the appearance of the finished package.

Though egg noodles look pretty much alike, packages can be wholly different even when the same colors are used. In this case, both UCO Food Corp. and Michigan Macaroni use red, white and blue on their printed bags. On the UCO job, blue predominates except for the trademark, which is red on a white circle. Michigan Macaroni uses red and white except for the ingredients and quality story, which are in blue.

Bag shapes vary from flat bags without side gussets

to satchel-bottom and square bags with such deep side plies that they approach a cylinder in shape when loaded. Bags intended for display lying flat or stapled to display boards, such as the Michigan Macaroni egg noodles or the Merrick marshmallows, should have a wide face in comparison to the side plies. If the height of a filled bag is twice its width, interesting and stable displays can be built up by alternating the direction of each layer in a stack. The Sunshine marshmallow-puff bag was designed so that bags could be stacked or stood up for display purposes. Inside paperboard dividers for each puff serve as a support which allows the bag to be displayed standing up. If the bag is stacked, the bottom color panel with the baker trademark offers end identification.

Consult your bag maker as to bag proportions to be used. A small fraction-of-an-inch change in some one



DISTINCTIVE packages can be achieved even when the same colors are used. These fresh produce bags all use combinations of red, green and white in different ways due to effective designing.



VARIATIONS in size and shape of bag depend on whether bags are displayed lying flat, upright or stapled to display board. Weight of product influences shape of bag and how it is displayed.

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of the planned dimensions may permit better service and may fit the production to equipment more readily available.

A job for design specialists

Because all traditional art is based on applying design on an opaque surface, few if any art schools or colleges teach the principles of transparent design. Most skilled designers in this field are connected with the leading converters. Frequently, they can suggest a minor change which steps up the beauty of the package while avoiding fussy details which increase printing costs and reduce the "impact."

To help your package designer, provide him with adequate background information. Give him the benefit

TRANSPARENT bag allows customer to inspect its contents—the reason why Sun Ray Products changed its cleaning pads package from a carton.



ONLY DECORATION on the Merrick marshmallow bag is the enlarged trademark on display panel. Simplicity in design shows off contents to best advantage in transparent bags. Brown and yellow color scheme used on mushroom bag subconsciously suggests the tastiness of cooked mushrooms.





of your own broad thinking. Acquaint him with competitive packaging so he can avoid unconscious duplication and can spend his time creating a uniquely different approach.

Give him a sample of the product to be packed. This insures color harmony of design and product, as well as correct specifications of packaging film to be used. By loading the bag shape with the proper weight of product, the fill line of the bag is determined and the design elements can be properly placed on the face of the bag. In designing the Sunshine bag, the designer, you will note, planned the bottom border to conceal dust from the puffs which might be unsightly.

Supply your designer with samples of packages now in use in addition to letterheads or labels or literature which show preferred styling and color scheme and selling copy and use directions.

To check the design effectiveness of a new bag or your present one, for that matter, load it with your product, seal or close it in the usual way. Place it as though on display in a store. Better yet, go to a nearby store and place it on display. Surround it with competing brands. Then make the "15-ft. test." Stand away and check the "impact." Determine if it stands out from competition.

Are brand name and product type immediately legible? Are the colors bright and compelling? Would Mrs. Housewife be apt to pick it up first? This procedure will expose weak elements of color and design.

While the produce put up by three fresh-produce packers is alike in appearance, each finished package is entirely different and distinctive. Both the Suffolk Farms and Uncle Sam brand bags are printed in red and white. Salad Time brand by Crosset Co. is green, red and white. The green panels are outlined in white to lift them away from the green color of the contents. Selling copy on bags varies from none to a brief statement of advantages, which readily is handled without cluttering up the design or destroying product visibility.

Don't pack the jury

The success of a particular package design is dependent on the emotional reactions of the people who see it on display. Although the boss's wife may have graduated from an art course in '03, she may not be the world's best authority on the design of a new package for Heap Full cereal. Within an organization there may be considerable disagreement regarding the art or color or copy. All of this can be resolved by showing the proposed designs, loaded with the product, to the dealers and consumers. Such a test need not be too elaborate or expensive.

In a recent opinion survey, printed bags were made up in three basic designs. Two of these were made up both in red and white and in blue and white, giving a total of five choices. Thirty grocers were interviewed. Fifty per cent of these voted for one design in red and white. About half the remainder picked the blue-and-white version of this same design. This left no doubt of the proper choice. No (Continued on page 286)

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STOKER IN A CARTON

Iron Fireman uses corrugated package that cuts cost 43%, saves ½ on shipping space, enables one-man installation

packaging requires engineering and even so large a product as a home stoker requires a package. Hence, it can be profitable to consider the problem of packaging when developing the design and engineering of a product. Convincing proof of this can be seen in the packaging method worked out for the new line of Coal Flow domestic stokers built by the Iron Fireman Mfg. Co., which has reduced package costs 43%.

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For years, Iron Fireman domestic stokers had been shipped from Cleveland in skeleton wooden crates which were bulky to handle. It was believed that a product as big and hefty as a stoker, weighing some 300 lbs. and 10 ft. long when assembled, just naturally should be packed in a crate. Of course, there were a few drawbacks to crates. In a crate, for instance, the stoker was almost entirely exposed to the elements and it wasn't unusual to have complaints come in that a unit had rusted or been scratched in shipping. The bulkiness of the crate—in shipping, warehousing and particularly when the dealer handled it for delivery and installation in a customer's home-was annoying. The crate was too big to get down into a basement so the installation men had to uncrate the stoker in the customer's back yard and then maneuver the heavy, awkward unit down to the basement. But still, no one worried about these inconveniences and thousands of Iron Fireman stokers were packed in crates every year.

Iron Fireman and container-company engineers working together designed a new, economical, practical corrugated package for the new Iron Fireman domestic stoker that out-classed the former crating method in many respects.

To test the new carton for its durability, stokers were shipped from one end of the country to the other, using every conceivable method of transportation. They were exposed to every possible condition, including hot dry climates, humid climates, rain, snow and ice. The results were so good that carton packaging was adopted for the new Coal Flow series of Iron Fireman stokers.

The new stoker carton completely protects the entire unit in shipping, yet it is strong enough to withstand the roughest handling en route. Designed so that cartons could be nested together, as shown in the illustration, the new package takes up considerably less space than the former crate. This solved one of Iron Fireman's greatest marketing problems. Since stokers are seasonal sellers, dealers were encouraged to keep a stock on hand during the heavy selling season in order to make immediate installations. However many dealers just did not have the storage (Continued on page 276)

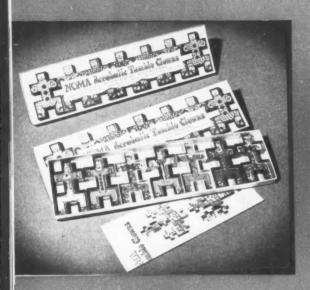


DOUBLE-HEADER corrugated carton that makes a form-fitting package for main stoker assembly is built up on skid and then locked together.



NESTING of L shapes makes possible the stacking of four stokers in the same space previously occupied by only three—a great advantage to the dealer. The carton is all-over printed in green, with yellow logotype in the center. Trademark design on ends is printed in red and black. Carton is of double-faced board.

MODERN PACKAGING





Lithographed box wraps carry full-color reproductions of Acrobatic Tumble Clowns, new toys made of polystyrene by Noma Electric Corp., New York. A novel feature of the toys is the use of die-cut color printed figures affixed to the plastic by means of a thermoplastic labeling machine, using thermoplastic coated labels the same as would be used in a packaging operation. Lithographed wraps, Garfield Press, New York. Designer, Leonard Ranko. Die-cut labels, Nashua Gummed & Coated Paper Co., Nashua, N. H. Labeler machine, New Jersey Machine Corp., Hoboken, N. J.

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A new, practical, wide-mouthed glass jar, instead of the traditional tall, tapered jar usually associated with cocktail cherries, is used for Swansdown cherries, packed by R. C. McAteer Co., Butler, Pa. The large mouth allows easy access of fork or spoon. Jar and closure, Hazel-Atlas Glass Co., Wheeling, W. Va.

New labels for McDougall-Butler Co., Inc., Buffalo, N. Y., line of paints (top can) throw all emphasis on company name and product identification. Clean-cut yellow block letters on a black oval in the orange top border have long-range shelf visibility. The simplified Buffalo trademark is much more forceful, though given only a fraction of the label area it formerly occupied.

Log Cabin's Wigwam syrup, a table syrup for use by hotels, restaurants and institutions, made by General Foods Corp., is being introduced in easy-to-open 1-gal. square cans. Red block and gold lettering against a cream background tell the trade and product story quickly. Can, Continental Can Co., New York.

The package for Belquick processed rice, Belmont Products Corp., New York, conveys the idea of speedy cooking by the broad red arrow whose tip forms 10 minutes in a die-cut window "watch face." The rice shows through the transparent window, while the color combination of red, yellow, white and black makes an eye-compelling package. Design, Idea Service, New York. Carton, Paramount Carton Corp., Brooklyn, N. Y.







PAGEANT

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A re-usable wooden shoeshine box holds two cans of Esquire boot polish, brushes, daubers and shoe-shine cloth for Knomark Mfg. Co., Brooklyn. Rubber tread on top offers steady base for the foot. Dowel sticks separate brushes and hold up polish. Cabinet, Merchants Box Co., Dallastown, Pa.

— The Kitchen Charmer kit of eight plastic kitchen detensils made by Kilgore Mfg. Co., Westerville, Ohio, in a three-color, self-merchandising box overcomes the retailer's objection to making out separate sales checks for such small items. The kit is a "natural" for kitchen shower, wedding or any gift occasion. Boxes, Columbus Paper Box Co., Columbus, Ohio.

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The two producers of aluminum are making an astute bid for wider acceptance of aluminum foil by packaging it in consumer units along with suggestions for household uses. Such familiarity with its advantages, they reason, can't help but be reflected in wider acceptance of aluminum foil as a commercial packaging material. Both boxes are foil laminated to paperboard. The triangular Kitch-N-Roll carton of Alcoa foil features a serrated edge for cutting. Reynolds cartons, Reynolds Metals Co., Richmond, Va. Kitch-N-Roll carton, United Board & Carton Corp., New York.

Peggy Sage's new summer "Fashion Pink" nail polish, base and lipstick in a light-weight metal case covered with simulated leather provides a new selling feature. Hinged case, lined with quilted satin-type paper, makes a handsome re-use jewel box.

Red and silver printed canisters with inner tamperproof seals have been adopted for mono sodium glutamate (food ingredient for intensifying flavors) manufactured by International Minerals & Chemicals Corp., Chicago. Triple brand names are used for the glutamate; Ac'cent, for institutions; Kou Chi Mei Wei Fen, for Chinese users; Shirayuki, for Japanese. Design, C. S. Macnair & Associates, Chicago. Cannisters, D. L. Clark Co., Rockford, Ill.









MODERN







Helene Pessl, Inc., creates new interest in its stock line of Little Lady toiletries for children by adopting a blue polystyrene package molded in the form of a merrygo-round toy. The removable top is supported by the tale can. Package molded by Clifton Plastics Corp., Clifton, N. J. Polystyrene, Monsanto Chemical Co.

A gift package of eight Berryland jams and preserves packed by Pacific Food Products Co., Seattle, took top honors in this year's annual Art Directors Show in Los Angeles. The box cover paper simulates a nailed wood box and carries a scenic vignette of Mount Rainier used as a trademark. This design is repeated on the labels and modified for all company promotional material. Designer, James Hastings, Seattle, Wash. Box wrap, Craftsman Press, Seattle. Labels, Troyer Printing Co., Seattle.

A simple drawing of construction workers tells quickly on a set-up box cover the use of Junior Contractor, a toy set sold by Saginaw Bay Industries, Inc., Bay City, Mich., which provides equipment and material made by Dow Chemical Co. to mold authentic model building blocks and bricks. Die-cut platform holds mold, pallet and rammer tool in place. Instructions, blueprints, roofing and window paper fit neatly on top. Same design is repeated on cans of extra molding mix. Box, Arrow Paper Co., Saginaw, Mich.

Full-sized photographic reproduction of product is the striking illustrative technique used by Samson United Corp., Rochester, N. Y., on the outer folding carton for its new tandem automatic toaster. Photographic halftones on reverse panel point out operating and design features convincingly. Carton, Rochester Folding Box Co., Rochester, N. Y.

Kellogg's improved individual-serving cereal packages, widely used by restaurants and institutions, eliminate the need of cutting open the carton. New cartons are scored in the center of the face. A slight pressure with the thumbs and a quick twist opens both the outer package and the inner waxed bag.





PAGEANT

After nearly 50 years, Carnation Co. has redesigned its famous evaporated milk label. The old label (left) originally carried no more copy than the new (right), but as legal requirements changed, more copy was added until finally the company felt shelf-display value had greatly diminished through loss of clarity and simplicity. The new label retains the basic red and white bands and carnations, but is modernized with brand and product name in clean-cut lettering for maximum readability. Labels, U. S. Printing & Lithograph Co., Cincinnati.

To gain attention and show off the unusual feature of hair on its Curly Top paper dolls, De Journette Mfg. Co., Atlanta, Ga., has chosen transparent cellulose acetate boxes. Boxes fabricated by Central States Paper & Bag Co., Inc., St. Louis, Mo. Acetate, Vuepak, Monsanto Chemical Co., Springfield, Mass.

Two transparent plastic tubes joined by a flat section form a novel package for fishing equipment made by Ashaway Line & Twine Mfg. Co., Ashaway, R. I. Around the middle piece is wound 30 ft. of line. In each corked tube are hooks, floats, sinkers, etc. The kit is molded in one piece of cellulose acetate butyrate. Kit molded by Arnold Brilhart, Ltd., Mineola, N. Y. Cellulose acetate butyrate, Tennessee Eastman Corp., Kingsport, Tenn.

A new package for 24 Junior No-Roll crayons sold by Milton Bradley Co., Springfield, Mass., is designed similarly to an artist's box. The box is divided so that the top slips over bottom section to expose the crayons. The floor of the box is angled so that each of the three rows is on a different level and the user may see all 24 colors at once.

A laminated aluminum foil box of sturdy, two-piece folding construction gives new gift appeal to New Arrival baby blankets sold by Stork Woolen Co. Die-cut acetate window in shape of stork gives visibility to product. Foil is lacquered to prevent scuffing. Printing is pink. blue or white to match blankets. Boxes, United Board & Carton Corp., New York.







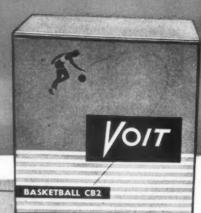






PUNCH-OUT WINDOW

It permits effective display of athletic balls in the for maximum promotion of Voit trade name





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FRONT AND BACK of new Voit carton. Perforated area in rear panel is punched out by dealer and used as a brace to push the ball forward so that it protrudes through opening. Paste-on front label is green; the remainder of the box is in maroon.



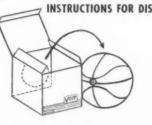
MASS DISPLAY is effective when front label and back display panels of the box are alternated. Heavy perforation makes it easy to push in and remove the window without tearing the box.

hy spend money on an attractive package for an item like a basketball if the ball is to be removed for display in the dealer's window or showcase and the package tossed aside? How can you display a basketball with its package so that it will have the benefit of strong identification of the manufacturer's name?

Pondering these questions, the W. J. Voit Rubber Corp., Los Angeles, came up with the interesting idea of simply providing a round, scored opening in one panel of an otherwise conventional folding carton with directions to the dealer to punch out this window and let a section of the ball protrude through, for a strikingly effective display.

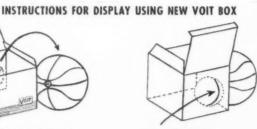
> OTHER AIDS are the paperboard display stand (used also for odd-shaped balls like footballs) and "self selling" leaflet tag attached to ball with sticker before leaving plant.

INSTRUCTION sheet that goes to dealer with each shipment of Voit balls. Simplicity and effectiveness of set-up invite cooperation by the dealer.

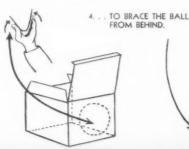


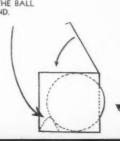
1. REMOVE BALL FROM BOX

3. BEND IT JUST ENOUGH



2. PUNCH THIS IN DON'T PULL IT OUT ...
(YOU'LL TEAR THE BOX)







As the carton design was finally worked out, the window appears on the side reversed from the main label panel. The entire carton is a rich, dark maroon, printed with gloss inks, except the label face, which is bright green. Thus a dramatic mass display can be worked out by alternating the plain maroon window panels—spotlighting the product—with the brightly designed green front panels, checkerboard fashion.

The Voit company manufactures a large line of rubber-covered athletic balls. Many of them (footballs, basketballs, volley balls, etc.) have a pebbled surface closely simulating conventional grain. I is especially important, therefore, that the prospective purchaser, be able to see and feel this textured surface to be convinced that the ball is a conventional one in every way except in the material used. Other products in the line include soccer balls, water polo, softball and beach balls, all of which are packaged under the family label. About 15,000 balls are produced daily.

The label itself is attention commanding. The lower one-third of the label is made up of alternating horizontal bars of green and silver. At the top of the barred area is a bold, black rectangle with the Voit name in white. A smaller black panel at the lower left identifies the contents of the box. In the upper left area is a stylized silhouette of an athlete demonstrating the identity of the product within—dribbling a basketball, kicking a soccer ball, passing a football, etc. A graceful, curving thin line connects the figure with the two black panels and lends dynamics to the design.

The green label, covering one whole face of the box, is pasted on. This enables a single size of box to accommodate a number of different products.

After the circular window section in the opposite panel is detached, the dealer is instructed to double it back and place it in the rear of the box as a brace to hold the ball in position so that it can be seen and felt through the window, as shown by the accompanying diagrams.

Each Voit ball, when packaged, is wrapped in tissue paper. The cartons are made of 0.036-point beater pulp board. Labels are printed on a special clay-coated stock to assure a good reproduction.

Choice of color in the label was dictated by the fact that Voit uses green on all its promotional material. The major problem was to join this "Voit green" with other colors in such a way that pleasing contrast would combine with highest visibility and so that the resulting color combination would appear appropriate for athletic equipment.

No matter where the eye strikes the label, its optical journey focuses on the word "Voit." There is no pause, no roaming, no waste. The curving line delivers impact and action. It gives the label movement, indicative of the product inside. The silver bars provide a continuous effect when lined on a shelf. Alternated with the window panels in a display, the bars prevent the word Voit from receding from view.

Combined with maroon, a color highly complimentary to green, the finished labeled box can be handled a great deal without soiling or showing finger marks. It can stand on shelves or in direct sunlight without appreciable fading or wear.

The new container was pre-sold to dealers through a series of sales bulletins. Each shipment contains a simple instruction sheet, advising dealers to punch the perforation in, rather than pull it out; showing them how to support the ball with the simple brace; stressing their mportance of displaying the trademark.

Voit also provides its dealers with collars and rhomboid stands for display. They synchronize with the

PRODUCTION OF balls is more than 14,000 a day and assembly-line techniques are required for their handling. Here the balls are being inspected, washed, polished and inflated.

CONVEYOR LINE takes balls away from packing tables after each one has been tagged, wrapped in tissue and inserted in folding carton. Cartons are of 0.036-point beater pulp board. Labels are printed on special clay-coated stock to assure good reproduction.





design of the new containers for a unified effect in mass display.

Another merchandising feature is the newly designed point-of-sale tag which is attached to each inflated Voit ball before it leaves the plant.

According to the company, the "stringer," as it is called, serves six purposes:

1. It is an eye-catcher which the customer can examine without removing the ball from the dealer's counter.

2. It sells the ball for the dealer while he is finishing waiting on someone else.

3. Taken home by the customer, it stimulates repeat sales of Voit products.

4. It contains a warranty statement making the enclosure of a separate warranty slip unnecessary.

5. It explains the construction, care and simple

soap-and-water technique for the cleaning of Voit balls.

6. It states the Voit repair policy covering possible injury to ball or valve while in use.

The new leaflet is strung to the ball by a red sticker in such a position that, when the ball is mounted for display, the leaflet dangles close to the front label on the ball without obscuring the label. Sticker and leaflet may be removed from the ball without marring or disfigurement.

Identical leaflets without strings are being packed with non-inflated balls, such as the softball, sportball and playground-ball lines.

The company reports that many of its distributors have ordered extra quantities of the new leaflets for use as direct mail advertising enclosures to customers.

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CREDITS: Label printed by Western Label Co., Los Angeles; cartons manufactured by Fibreboard Products, Inc., San Francisco.

BURLAP BAG WITH PAPER-SLEEVE VALVE

A new feature for burlap bags, recently adopted by Atlantic Fertilizer Corp.; Jamesport-Bridgehampton, N. Y., is a paper-sleeve valve, said to increase greatly the re-use value of such containers and to provide more convenience and economy in the packaging operation.

The paper sleeve is made of smooth kraft paper bonded to the burlap by a thermoplastic adhesive. The paper insert is placed in the mouth of the turned bag and passed through a special heat-seal-

ing machine where heat and pressure fasten it securely to the fabric.

Both the paper insert and the burlap bag are then folded to form the sleeve valve. The top of the bag is sewn shut.

The paper-valve burlap bags may be filled on the same packing equipment as the valve paper bags and, therefore, require no additional filling equipment. The burlap bags are said to fill more rapidly than paper bags, because their porosity permits rapid escape of air.

A rip-cord closure permits easy opening by a quick jerk on either end of the cord without danger to the bag. After being emptied, the undamaged bag

becomes a regular open-mouth burlap bag which can be used as a potato pick-up sack or for many other re-use purposes.

This paper valve was designed by the bag maker for burlap fertilizer bags, but it is believed it may find many other uses in the packaging of free-flowing commodities.

CREDIT: Paper-valve burlap bag, Bemis Bro. Bag Co., St. Louis, Mo.

FILLED BAG showing how the paper-sleeve valve looks closed.

RIP-CORD OPENING and papersleeve valve shown in cutaway view.





DISPLAY BOTTLES

New technique for making half-section plastic replicas

provides eye-catching and space-saving promotion pieces

A plastic half-section of a bottle which duplicates the appearance of the actual package with striking realism is the interesting new display idea now being widely accepted in the brewing and distilling fields. Development of a special technique for forming these replicas from sheet plastic opens a wide field for other types of package replicas that can serve as purchase reminders.

Among the manufacturers who are using this new display device are Frankfort Distillers, Narragansett Breweries, National Distillers, Park & Tilford and United Distillers, all of whom supply their dealers with these selling aides.

The easy-to-mount display pieces are actually half bottles with flat backs. Transparent or opaque-colored sheet acetate, specially formulated and produced by extrusion in shades matching the color of the regular bottle, is drawn to the exact shape of a half-section of the original model. A straight back section is attached by electronic sealing and then the formed item is die cut to remove the flash. After the curved drawn section is attached to the flat back, the bottle goes through the usual finishing operations—application of actual labels and seal caps—which serve to complete the illusion.

One of the features of this package display is the ease with which it can be attached wherever the shop keeper or bartender feels it will serve best. To the back section of the replica are attached felt resting pieces and sections of pressure-sensitive tape, the ends of which are stripped, exposing the adhesive surfaces which adhere to a wall or any flat surface.

Two sales-getting characteristics are presented in this type of package display. It registers the package in the observer's mind and it puts to work a simple principle of advertising—not to say too much. Not one line of copy need be supplied, because the display tells and sells the whole story.

Heretofore, displays for this purpose, usually a card or sign, took up too much display room and worked against their own chances of being used. These actualsize replicas can be neatly affixed to a door frame, for example, to catch the shopper's eye on leaving the store.

The package display device has been under development for some time and careful study and planning have gone into its workable production methods. Extruded acetate-sheet stock was selected because of its good drawing qualities, form retentiveness, light weight and its color rightness. Special care is taken in color

matching to achieve life and interest when the transparent bottle is placed against a solid background.

Although, at the present time, distribution of these product doubles is confined to the distilling and brewing trades, increased facilities for production now make it possible for any bottler or manufacturer with adaptable containers to take advantage of the novel appeal of this medium. Other fields which may find this development of interest include the whole family of soft drinks, catsups, syrups, dressings, can goods, milk and medicines.

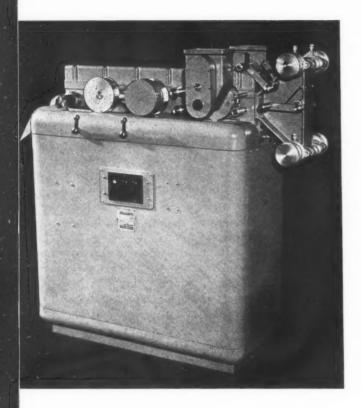
PRESSURE-SENSITIVE adhesive attaches realistic bottle replica to a back-bar, window, door, wall or any flat traffic spot. At the right is a close-up view of the half-bottle formed from acetate sheet, with flat back attached by electronic sealing.





CREDIT: Display bottle, National Transparent Plastics Co., Inc., Springfield, Mass. Acetate, "Lumarith," Celanese Corp. of America, New York.

VERSATILE UNIT PACKAGER



General Mills, Inc., Minneapolis, Minn., is producing an improved model of the unit packager formerly known as the Chanwall Packette, under an exclusive manufacturing and sales agreement with Chanwall Products, Inc., of Cleveland, Ohio. The new Uni-Pak machine will automatically form, fill and heat seal individual packets made of cellophane, paper or foil with powdered, granular or heavy viscous materials, as well as tablets, pills and candies.

The Uni-Pak is said to produce completely formed, filled and heat-sealed packets at speeds up to 340 unit packages per minute depending on type of product, heat-sealable material used and the length of the package.

Operation of the machine, the manufacturers claim, is fundamentally simple. It provides continuous roll feed of two layers of thermosetting wrapping material, deposits measured amounts of the product on the lower ribbon or layer of the wrapping material and completes the package by heat sealing the edges of each unit.

By changing the various rolls which are on the machine, it is possible to produce multi-sized packages. The machine illustrated has a limit in width of package from a minimum of $1^3/_4$ in. to a maximum of 3 in. and can accommodate package lengths from $1^1/_2$ to 9 in. These dimensions of width and length include a minimum sealed edge of $1/_4$ in.

Sealing rolls are thermostatically controlled to maintain proper heat-sealing temperature at all times.

The unit is powered by a $^{1}/_{4}$ hp. motor and floor area required for the machine is 24 by 60 in.

NEW MACHINERY

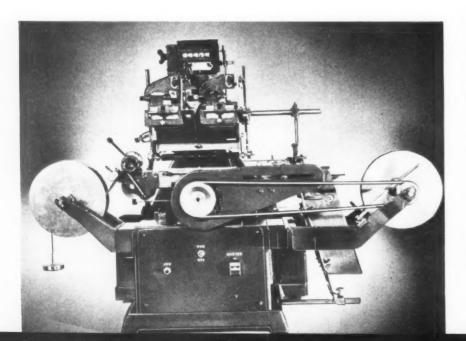
FABRIC OR PAPER LABEL PRINTER

A two-color printing machine which will produce complete, small paper or cloth labels from rolls of blank material is currently being offered by Markem Machine Co., Keene, N. H. Operating at

a speed of 75 to 80 complete labels per minute, this machine takes the label stock fed from the roll, prints it in two colors and then completes the operation by (1) rewinding the labels in a roll or (2) perforating (ready for tearing) and then rewinding in a roll or (3) cutting off and neatly stacking the labels.

A high quality imprint is achieved even on especially hard-to-mark fabric, it is said, and trademarks and special designs may be accurately duplicated. This Model 126 allows for printing of an area up to $3^{1}/_{8}$ by $2^{1}/_{4}$ in. on label sizes up to 6 by $2^{1}/_{2}$ in. The type-holding method is designed to facilitate quick changes of type required for variable information imprints. A noteworthy feature is a fusing attachment which actually fuses the cut ends of fabric labels to form smooth, sealed ends which do not require pinking or folding under.

The machine occupies 20 by 23 in. and is 26 in. in height. Two styles of counting devices are available—one, a predetermined automatic counter which stops the machine after the desired number of labels has been printed; the other merely records each printing stroke.



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UNLOADER AND UNSCRAMBLER

The A-B-C Packaging Machine Corp., Moberly, Mo., is offering a new fully automatic case-unloading machine which unloads glass-container-filled cases and places the glass containers in a single line, in an upright position, for delivery to the washer or filler. The makers claim it affords a speedy, economical method of removing the glass containers from re-shippable cartons and, depending upon the speed of the conveyor system, does the work of from one to three persons. It requires no attendant.

Cases are automatically fed from the box car or store room direct to the machine on a gravity conveyor. They are timed into the machine where the lower outer flaps are opened automatically and the bottles unloaded onto the unscrambler.

An unusual arrangement of the conveyors operating in opposite directions "unscramble" the glass containers and carry them out single file in filling position

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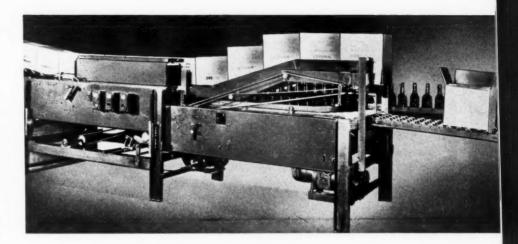
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The empty cases with their partitions held in place within the case by means of pressure guide rails travel up two grooved tracks to the empty carton take-off conveyor. Here the cartons are delivered in an upright position and may be conveyed to the packing station.

The machine is fully adjustable to all

glass-container sizes being used commercially today.

The manufacturer of the machine reports an experimental model of this machine was tested in the plant of a leading distiller for the past three years, during which time constant improvements were made to meet actual operating conditions.

NEW MACHINERY

LOW COST, FLEXIBLE CARTONER

Container Equipment Corp., Newark, N. J., announces a new fully automatic machine for packaging such items as baked goods, machine parts, bottles and products in bags.

Designated by the manufacturer as the Ceco Model 40, this machine is said to be within the reach of even the most modest packing company because of its low cost.

The machine automatically feeds the flat carton from a stack, sets it up, opens all its flaps and then closes the inner flaps on one end. The product is then slid into the other end from a stainless steel inserting conveyor which travels at the same speed as the opened carton.

A single operator then inserts the product at a speed of approximately 40 per minute.

The completely filled carton may then be automatically closed in either of three alternate ways.

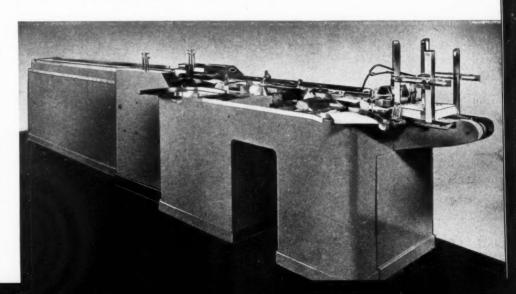
The machine can (1) glue seal both

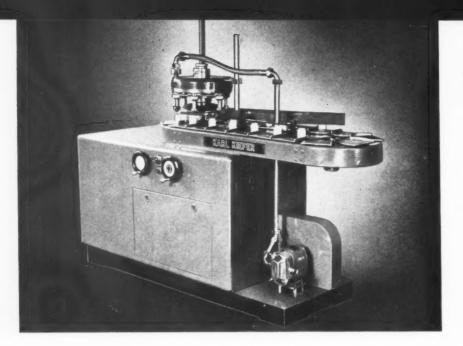
ends of the carton, (2) glue seal one end and tuck in the other end or (3) it can tuck in both ends of the filled carton to complete the package.

Outstanding feature of the machine is its flexibility. It can easily be adjusted without tools for a wide range of carton sizes. Cartons small enough for pudding or large enough for shoes can all be handled with equal facility on the same machine.

Like all machines built by this company, it is equipped with an automatic circulating glue-pump system.

Photograph shows baked goods on feeding conveyor, with cartons being set up automatically prior to filling and closing.





IMPROVED VISCOUS FILLER

Embodying many mechanical improvements and streamlining the exterior appearance of its Vari-Visco filling machine, The Karl Kiefer Machine Co., Cincinnati, Ohio, announces its newly designed "Cadet Model" viscous-mate-

rial filler which is illustrated in the accompanying photograph.

It is recommended by its builders for filling such products as preserves, jelly, baby food, mayonnaise, mustard, paint, facial cream, lubricating compounds, syrup and molasses, adhesives, shoe polish, waxes, chemical compounds and many other similar viscous items.

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This improved model has a container capacity ranging up to 32-oz. liquid measure.

The machine's maximum speed is rated at 60 individual containers per minute, the rate of speed depending on the size of the particular container which is being filled.

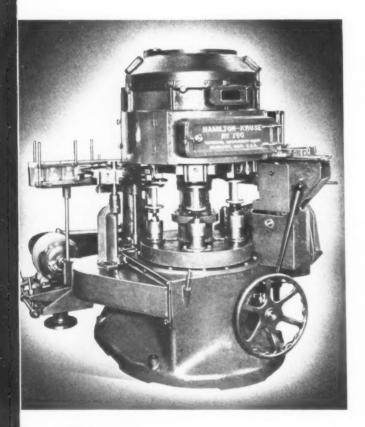
Easy adjustment for product volume and rate of delivery are claimed by the manufacturer to be among the new machine's noteworthy and outstanding features.

Necessary regulations are said to be achieved with precision merely by turning the hand wheels located on the front panel.

Thus, the machine is said to provide for convenient and simple set-ups without any appreciable loss of the packer's production time.

Conveyor and tray-type models of the heavy duty Vari-Visco filling machines are available for higher speeds as well as for greater range of container sizes.

NEW MACHINERY



END SEAMER FOR CANS

A new high-speed, automatic end seamer for square and irregular-shaped cans, said to be the first machine of its kind ever offered for general sale, is announced as available by Lima-Hamilton Corp., Hamilton, Ohio.

Known as the Hamilton-Kruse Model No. 150, it is a completely automatic, four-head unit with four round rollers on each head. It is reported to have a speed of 150 cans per minute.

The machine will handle cans of the following base sizes: length, $2^3/_4$ to $4^1/_2$ in.; width, $1^3/_8$ to $2^5/_{16}$ in.; across corners, $2^{13}/_{16}$ to $4^3/_4$ in.; height, 2 to 11 in.

In operation, the cans remain stationery on the base plates during the seaming.

The machine is equipped with automatic body and end feeds, a complete set of seaming parts and its own motor and control.

Built for heavy duty, it is of rugged and precise construction, yet the machine is said to have unusually quiet operation, according to the manufacturer

Its features include low speed heads, exceptional ease of adjustment and automatic lubrication.

Its installation, the builders claim, will bring about a step-up in the output of any line, with a continuous can flow and firm maintenance of settings.

Floor space required is 72 by 82 in.; height over-all is 74 in.; weight, 8,300 lbs. The motor for individual drive is 3 hp. and is equipped with magnetic across-the-line starter and control buttons.

PRODUCE BAGGER

The newest semi-automatic machine made by the Citrus Bagging Machine Co., Pomona, Calif., for the pre-packaging of produce was recently shown at the United Fresh Fruit and Vegetable Convention in San Francisco.

The machine was originally developed and thoroughly tested in California orange-packing houses.

It has bagged up to 40 7-lb., openmesh bags of oranges per minute, employing four operators in conjunction with a conveyor and stapler.

Two operators put on the empty bags and the other two take off the filled bags as the machine is rotating. The table can be made to rotate at any desired speed.

This machine will handle any fruit or vegetable that will roll and, therefore, can be used for bagging such products as potatoes and onions in addition to the citrus fruit items.

It is adjustable for packing weights up to 25 lbs.

There are nine individual filling heads arranged at equal spaces around the



flat circular table. Oranges placed on the table drop into mesh bags under each of the heads.

Consumer preferences for pre-packaged fruits and vegetables in convenient, easily handled units, makes the operation of this machine practical at wholesale terminals, as well as by retailers, for breaking large-sized loads into smaller and more easily sold units with a minimum labor cost and a minimum amount of handling, according to reports by the makers.

The machine is equipped with ¹/₃-hp. motor and may be connected into the usual 110-volt power line.

NEW MACHINERY

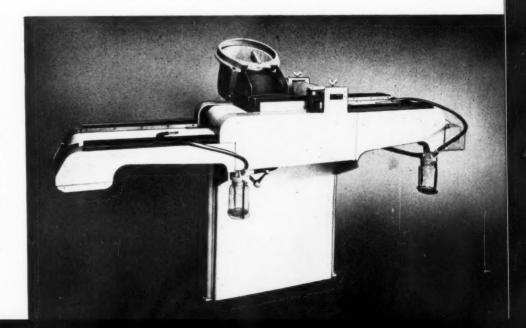
TABLET INSPECTION UNIT

The Lakso Co., Fitchburg, Mass., is now making available an inspection unit designed primarily to eliminate the time-consuming and tedious manual handling of tablets during the inspection operation. The machine permits the attention of the operator to be wholly concentrated on the actual inspection operation; tablets are untouched by hands and the entire inspection is completed in a fraction of the time required by other methods, the makers claim. The unit may also be used for the inspection of capsules and similar products.

The continuous flow of tablets from the non-agitating, non-abrasive hopper permits the formation of any desired pattern on the inspection belt moving to the right. The tablets are automatically turned over before conveying them to the left of the machine for reverseside inspection. This assures over-all inspection before they are dropped into a receiving container. Imperfect or chipped tablets are quickly removed by means of a pair of vacuum nozzles connected to a self-contained vacuum unit.

Rate of inspection is controlled by two separate variable-speed drives one for the hopper and one for the inspection belts. The hopper has a volume of 2,000 cu. in. and is so designed that even the most friable tablet is undamaged, it is stated.

All bearings are of the sealed type and, therefore, no lubrication of the equipment is required.



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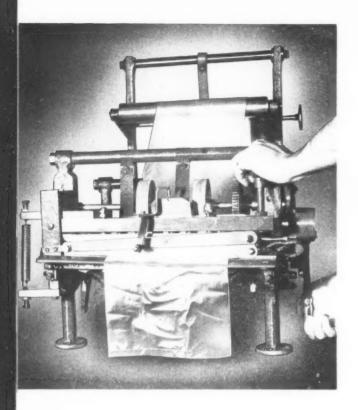
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POLYETHYLENE BAG MAKER



A new machine for making bags from polyethylene-film tubing by the heat-sealing method is available from the Heat Seal-It Co., Philadelphia, Pa.

This machine will take tubing of any width up to 9 in. and will produce bags at the rate of from 30 to 35 per minute, depending upon the skill of the operator.

The entire bag-making operation, which can be handled by inexperienced and untrained operators, is performed by hand—no motor is required.

By a stroke of the right hand, the operator moves the hand lever which draws the polyethylene tubing off the roll to a predetermined length (which is adjustable to requirements) and then with the left hand lowers the knob. This seals the tube, forming the bottom of the bag and cutting it off in one single operation.

For subsequent sealing of the bags after they have been filled, the company makes a line of special heat sealers.

The machine seals with a pair of heated jaws of special construction that apply a strong heat seal to form the bottom of the bag. Pressure and heat of the machine can be controlled to achieve the best results without any danger of the polyethylene adhering to the sealing jaws.

The simple construction of the machine is said to be one of the reasons for its low cost, said to be within the reach of every potential user.

Maintenance is claimed to be practically eliminated, since there are no intricate parts to break or get out of order.

NEW MACHINERY

WRAPS, HEAT SEALS CANDY POPS

The Wrap-Ade Machine Co., Inc., Brooklyn, N. Y., has developed a fully automatic wrapping and heat-sealing machine for candy pops at various rates of speed up to 120 sealed pops per minute,

The wrapping material which is being used with the machine is 300 MST cellophane.

The pops are fed manually to a continuous-moving chain conveyor which carries them between two webs of

cellophane, passing them through rotary heat sealers.

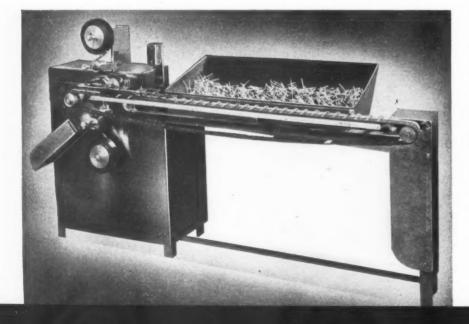
The sticks of the pops are automatically synchronized into recesses in the wheels of the sealer so that a tight wrap is effected around the stick as well as the candy. The cut-off is automatic by means of reciprocating knives.

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The machine can be supplied with either a straight or round cut-off, whichever is best suited to the contour of the pop. The straight cut-off forms a square package, while the other type yields a round heat-sealed wrap. The wrapped pops are then carried along by a conveyor, dropped down a chute and into a receptacle.

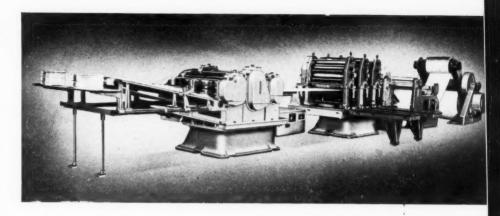
The manufacturers report that the machine has been production tested in the plant of a leading pop manufacturer and has been trouble-free in operation, heat sealing up to 120 pops per minute.



ROTARY LETTERPRESS

The Sperry Corp., Long Island City, N. Y., announces a new rotary letterpress, designed for application in the specialty field, which may be equipped with rewind, rotary sheeter and pile delivery, or with rotary cutters and creasers for carton production. The press is designed to run at speeds upwards of 1,000 ft. per minute, yet is said to maintain highest quality printing throughout the entire speed range.

The new printer incorporates many interesting features from roll stand to final delivery. The roll stand is unique in that it employs an entirely new method of roll handling without the use of core shafts or overhead crane. It permits new stock rolls to be brought to the run-off position without stopping the press. The color units are roller mounted, permitting removal to a dolly, out of the web path. This permits "make-ready" while the mounted color units are running another job and is estimated to save from 75 to 90% in make-ready time, it is claimed.



Other noteworthy features are: entire ink-distribution system throw-off in one operation with one lever, running register control easily accessible and simple in operation for each color unit, all moving parts ball-bearing mounted.

Three of these rotary letterpress printers, equipped with new type of rotary dies for cutting and creasing paperboard milk containers, have been installed at the plant of the Kieckhefer Corp. at Delair, N. J. Current production of carton blanks is reported to be around 1,000 per minute. Completed cartons, printed in from one to three colors, creased, cut and waste removed, are produced in one continuous operation at high rates of speed ranging in lengths of from 500 to 600 ft. per minute.

NEW MACHINERY

UNIT PACKAGER

Ketchpel Engineering Co., West Englewood, N. J., announces the development of a machine for the unit packaging of powdered products of all kinds, seeds, small candies, nuts, and screws, etc., in packets pinch- or twist-sealed or crimped by heat sealing as illustrated in the accompanying photograph. The pinch or twist seal may be heat sealed, if desired.

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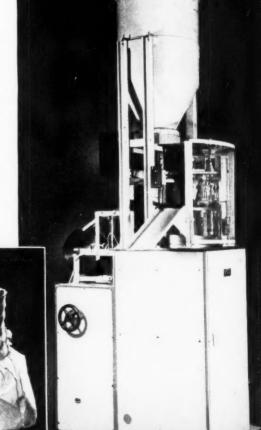
The machine forms a bag from a sheet of wax paper, cellophane or aluminum foil cut from a roll which is 12 in, in diameter.

The product to be packaged is metered or screw-fed into the bag, after which it is closed by any one of the methods mentioned.

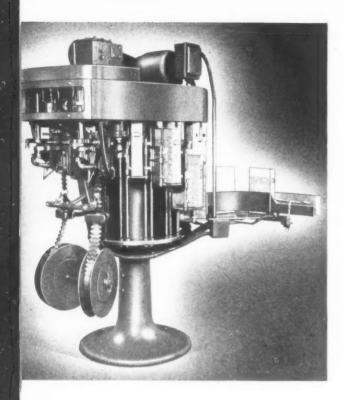
The completed package size, may vary from $\frac{5}{8}$ to $\frac{1}{2}$ in. in diameter and is tear-drop in shape. The Uni-Pak operates at 60 strokes per minute, but some materials can be packed two at a time to obtain a production of 120 prod-

ucts per minute. The machine is fully automatic and requires no operator, since the safety controls automatically stop the machine when the supply of packaging material is exhausted. The hopper is sufficiently large to hold a 6-hr. supply of the product for uninterrupted operation.

Two models are available—one having a hopper with a metering device for free-flowing products and the other with an auger-feed mechanism for non-free-flowing materials.



POURING SPOUT-INSERTING MACHINE



Seal Spout Corp., Newark, N. J., announces the development of a new high-speed, spout-inserting machine for inserting their aluminum pouring spouts into cartons for use with free-flowing granular products.

This machine was originally designed for a nationally advertised granular soap product for which a 30% larger pouring spout was

The new model was developed to insert the larger spout and is said to be operating in an efficient manner.

In the plant of the product manufacturer, this completely automatic machine is placed in the packaging line between the bottomend seal and filling operations.

After the carton bottoms have been sealed, the containers move along a conveyor to the spout-inserting machine where the pouring spouts are inserted into the empty cartons.

The containers once again move by conveyor to the filling station and then on to the final sealing operation.

The aluminum pouring spouts, as well as the machine for inserting them, are produced by the Seal-Spout Corp.

This machine is one of a variety designed for either high or low speed packaging-line needs.

The company has also announced that it is now making available a hand-fed machine for inserting multi-sized pouring spouts in large and small sized cartons, said to be adaptable for use in operations requiring smaller output.

NEW MACHINERY

ROLL-TYPE LABELER

Oliver Machinery Co., Grand Rapids, Mich., is offering a labeling machine which is said to double seal full telescope boxes at the rate of 60 packages per minute.

This machine, known as the Oliver No. 802, may be used for single- or double-sealing operations. When used for double sealing of telescope boxes, it affords added protection against pilferage.

The company is also offering its Oliver No. 801 label imprinter which can be integrated in the labeling operation.

A combination of the No. 801 label imprinter and the No. 802 unit labeler may be used, for instance, to imprint

and apply shipping tickets to small cartons where a considerable number of the units are to be shipped to the same customer. th

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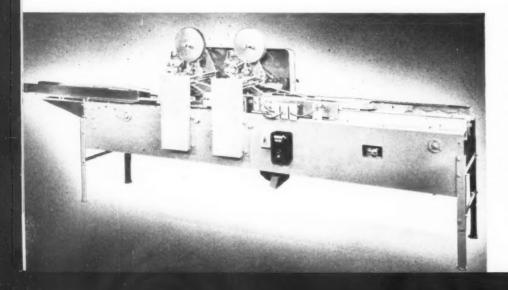
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Furthermore, this combination of equipment may be an adjunct to existing carton-sealing machinery for address stickers, brand identification, etc. The company reports the labeler has met with wide acceptance when installed either separately or in combination with the imprinter as a part of the labeler.

The Oliver No. 802 installed in the plant of a leading confectionery manufacturer is used to double seal full telescope boxes against the possibility of pilferage.

The manufacturers are one of the leading producers of roll-type thermoplastic labels.

In addition to the large number of stock models made by the company, there are also being produced several special adaptations of their machines for specific operations wherever the need is indicated.



ROTARY FILLER

A fully automatic rotary filling machine which will handle viscous, foamy or still liquids, as well as all styles and shapes of containers, has been announced by the MRM Co., Inc., Brooklyn, N. Y.

This versatile filler, of simple design, is entirely enclosed in a steel cabinet which compactly covers the complete working mechanism. It is said to require no skilled maintenance or operation.

Among the important features of this Model R-48 are: (1) an overhead cam to prevent bottle breakage due to choke necks, (2) one single-head adjustment to simplify changing from one sized container to another and (3) a mechanism to permit the filling of foamy as well as still liquids on the same filler.

The machine is equipped with variable speed drive which permits simple and quick adjustments.

This model may be used for filling

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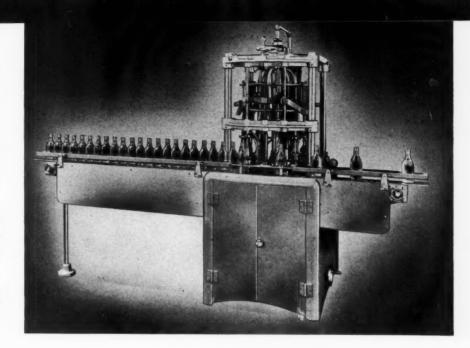
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such a wide variety of products as syrups, chemicals, wines, floor wax, detergents, oils, etc., into all types of containers from sprinkler-top glass to wide-mouth jars and cans, holding from a fraction of an ounce to as much as one quart. Contact parts may be supplied in whatever kind of material that is required by the user.

This company is also producing a low-cost Model "B" filler, designed for handling foamy to viscous liquids on small production runs, requiring a great many quick changes.

NEW MACHINERY

PLASTIC CYLINDER BEADER

A new vertical cylinder beader, especially designed for simultaneously beading both ends of a plastic cylinder in one operation, has been developed by the Taber Instrument Corp., North Tonawanda, N. Y.

The machine, the Taber turret-type cylinder beader, is equipped with an automatic loader and with either fixed or oscillating dies, depending on the desired bead design.

Six or 12 dies are used for single or double-end beading. The accompanying photograph shows the 12-die set-up for beading both ends simultaneously.

In operation, synchronized metal fingers grasp the cylinder and place it against either the single or double set of electrically heated, thermostatically controlled dies for the beading process.

Cylinders may be of cellulose acetate, ethyl cellulose, vinyl acetate or cellulose nitrate, and the production rate is said to be up to 20 per minute.

Engineering features include a variable transmission to permit close regulation of operating speed to correlate with die temperatures, making it possible to compensate for variations in material characteristics and atmospheric conditions, it is claimed.

The company is also producing a horizontal cylinder beader designed to bead one or both ends of a plastic cylinder with similar or different beading in one operation.

Operation of this machine is similar to that of the turret-type, but being a three-position unit, it turns out four to eight beaded cylinders per minute.



STEEL BALLS IN UNIT LOTS

A comprehensive program of packaging enables SKF to distribute these vital products in a way that is more convenient and more economical



A STEP FORWARD in the anti-friction bearing industry is SKF's new unit program for the resale by distributors of precision balls. Twenty-two fractional sizes of ball bearings are packaged in individual containers.

A mong the untold thousands of industrial products which roll off the nation's production lines every year is an indispensable item without which the daily activities of millions of Americans would be seriously handicapped.

The item is simply the steel ball. It is doubtful whether any precision product is manufactured in such astronomical quantities at so little cost. Billions of these spheres, ranging from midgets half the size of a pin head for ball-point pens to those several inches in diameter for large-size ball bearings, are turned out annually in the United States.

These steel balls, touching about every phase of daily life from the cradle to the grave, are used in hundreds of ways. They are found in perambulators and walkers, roller skates and scooters, bicycles and motor vehicles. Games and toys have them, too. In the office, they're hidden in typewriters, filing cabinets, swivel chairs, calculating machines and other business equipment. Imbedded in the joints of artificial limbs are tiny steel balls responsible for the articulation of such appliances.

As one of the nation's largest manufacturers of these precision balls, SKF Industries, Inc., Philadelphia, has an enviable reputation. Its trademark for these balls, a kneeling Atlas supporting a huge ball on his shoulders, is familiarly known.

While the bulk of these balls is used by the antifriction bearing industry, a substantial quantity of which goes into the company's bearings, large amounts are sold through distributors to wholesale users ranging from large manufacturers down to buyers of small lots, such as the general repairman.

It was the problem of enabling the distributor to improve his service to the small consumer, in addition to furnishing him with a convenient means of handling small sales, that impelled SKF, on March 15, to put into effect a new packaging program that for the first time in the industry provides for the resale of the top grade of balls in unit packages at an economical price.

Steel balls have been sold in bulk for many years. Depending upon size, cartons of these balls weigh from three to 10 lbs. For instance, $^1/_8$ -in. balls, of which there are 3,474 to the pound, are packaged in lots of 10,000. A box of $^1/_4$ -in. balls—there are 434 to the pound—contains 2,000 spheres. Half-inch balls, numbering 54 to the pound, total 500 to a box. Sixty 1-in. balls—6.78 balls to the pound—make up a standard carton.

Thus, if a mechanic needed two dozen ¹/₄-in. balls for replacement in a lawn mower, it was necessary for the distributor, in filling the order, to count out the required number, enclose them in any container that might be handy, determine the price on the basis of cost to him in lots of 1,000 and make changes in stock records.

The disadvantages of this procedure are obvious. The biggest—and the one giving all alike the most concern—was the handling of the balls. Every pre-

caution possible is taken by the manufacturer to guard against corrosion from the time the balls come off the production line until they reach the distributor. They are inspected and gauged under controlled conditions of temperature and humidity and coated with grease prior to packaging. Such rigid measures are necessary, for the balls experience a storage life—whether on the distributor's shelves, in a manufacturer's tool room or in a small repair shop—of unpredictable length. Precision would be meaningless if it were not for these safeguards.

Yet, in the resale of the balls in small lots, they were subject to corrosion from handling. If any dropped on the counter or on the floor—and this invariably happened—dirt and other foreign matter that was collected became a source of contamination if the balls were returned to their original carton.

From the standpoint of the distributor, the disadvantage was the time and cost of making the transaction. He had no convenient method for handling these small sales and he never was in a position to determine accurately his margin of profit. And unless he kept a strict accounting—at best a tedious task—he never knew how many balls remained in a carton after making a sale. The customer, on the other hand, may or may not have been charged a reasonable price. But more importantly, the balls had been handled before he was ready to use them.

As industrial development increased over the years, carrying with it a greater demand for balls, the problem of broken-lot sales kept pace. SKF first conceived the new packaging program during the war, but the idea was shelved until it could receive the attention it deserved.

Unit packaging of balls is not new. Years ago, the Atlas Ball Co., then an SKF subsidiary, packaged balls for automobile wheel bearings. Due to improvements in bearing design and the wider use of roller bearings in

NEW UNIT PACKAGES are contrasted with the bulk method (right) of handling broken-lot sales. Ten packages of balls fit into the larger boxes.



BRAND NAME, Atlas, is prominently displayed on these boxes on yellow labels with black imprint. Large boxes have package numbers corresponding to the various sizes of balls. Label tells number of unit boxes, ball size and number of balls in unit box.

ATLAS BALLS

ATTAS BALL





BROKEN-LOT SALES from bulk packages previously subjected precision-made balls to possibility of corrosion. Perspiration from the dealer's hand might be enough to ruin a bearing.

automobiles, this type of packaging gradually disappeared.

In tackling the unit package, SKF worked backwards. Uppermost in mind was the charge that should be made, after mark-ups, for a small carton of balls of a given size. Thorough discussion of this point led to \$1 as the nominal figure—the minimum charge made by SKF on ball sales, however small.

The second step was to decide the quantities of the various sizes of balls to be sold for this sum. This led to a formula, for example, that called for 350 balls ³/₃₂ in.—the smallest in the unit-packaging program—in the "individual" cartons. As the ball size increased, the quantity decreased. Half-inch balls totaled 25 to a unit, to four of the 1-in. balls.

Next, it was agreed that these small boxes would be packaged in units of 10. At this point, the program moved into the final phase, that of the packages themselves, and a committee was set up consisting of all those having an interest in the new project. This committee consisted of representatives of the sales, advertising, purchasing and engineering departments.

The question immediately arose as to whether any of the three sizes of cartons used in bulk packaging of the 80 fractional sizes of balls could be worked into the program.

Unit cartons able to fit into the large boxes already available were designed and manufactured. Considerable savings could be effected if the pre-determined number of balls of each size could be enclosed in the unit boxes.

Fortunately, this turned out to be the case. Of the 22 fractional sizes of balls— $^3/_{32}$ to 1 in.—selected for the program, it was found that all but the four largest sizes would fit into the three sizes of large cartons. All that was needed was to design another carton to take care of the remaining four sizes of balls. These large cartons, long in use, are made from No. 1 grade kraft board with creased and wire-stitched blanks. Both the box and lid are covered in black skytogen paper.

For the smaller boxes, the specifications laid down were that they were to be strong enough to withstand the weight of shifting loads, easy to seal, moistureproof and greaseproof. This resulted in boxes of 0.035 plain chipboard with an inner lining of amber glassine paper. Both boxes and lids were covered with a 40-lb. natural-color kraft paper and the lids were thumb cut. Mailing clips were attached at the ends to prevent separation of box and lid after loading.

The small cartons have these inside dimensions: $1^{13}/_{16}$ by $1^{1}/_{8}$ by ${}^{5}/_{8}$, lid ${}^{5}/_{8}$; $2^{5}/_{16}$ by $1^{1}/_{4}$ by ${}^{11}/_{16}$, lid ${}^{11}/_{16}$; $2^{3}/_{16}$ by $1^{13}/_{16}$ by $1^{1}/_{8}$, lid ${}^{1}/_{8}$; and $2^{3}/_{16}$ by $1^{13}/_{16}$ by $1^{7}/_{16}$, lid $1^{7}/_{16}$. Inside dimensions of the large boxes are: $3^{11}/_{16}$ by $2^{11}/_{16}$ by $2^{1}/_{16}$; 4 by $3^{3}/_{16}$ by $2^{9}/_{16}$; $6^{1}/_{8}$ by $4^{3}/_{16}$ by $2^{1}/_{2}$; and $7^{3}/_{4}$ by $4^{3}/_{16}$ by $2^{1}/_{2}$.

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To identify the new package, so as to distinguish it from the bulk cartons for the three different grades of steel balls and for bronze balls, a new label had to be designed. This was done by the advertising department and it came up with a yellow label with black imprint. Two sizes of labels were designed for the large cartons and one for the unit boxes.

In designing the label for the unit cartons, there were three considerations: (1) maintenance of the popular and widely known brand name, "Atlas," and the setting off of this trademark; (2) the use of SKF Industries, Inc., as a signature only and (3) specifying of the ball size and number for easy identification by the distributor and customer. On the large cartons, the label tells the distributor the number of unit boxes, the ball size and number of balls per unit box. However, these labels also carry a package number. For example, if the ball size is 3/32 in., the package number is three. Half-inch balls have 16 as a package number, while 1-in. balls have 32 as a number. Not only does this numbering system indicate the type of package, as distinguished from the bulk package, but it facilitates reordering by the distributor and avoids confusion when the order is received by the manufacturer.

SKF believes that the distributor and the customer will be greatly benefited by the new packaging program. The distributor—there are approximately 800, including automotive jobbers, who stock SKF products—has a convenient means of handling broken lots and he can tell as a glance the status of his sales. The customer is assured of getting his money's worth. Last, but not least, corrosion is eliminated.

CREDITS: Boxes, Walter P. Miller Co., Inc., Philadelphia.

FESTIVE-OCCASION CAKES

Window packages that encourage frequent purchase for home use or as gifts can build profits for the baker

There's extra profit for bakers in decorated cakes for special occasions, if they are properly packaged. Such cakes need not be limited to birthdays or holidays. If Pop gets a raise, that can be an occasion for a special cake, as can Mom's return from the hospital with a new baby, Brother's last dinner before he goes to college, Sister's meeting of the girls' club, or a shower for some friend who is getting married.

Decorated cakes also make excellent gifts for special occasions. Presented in a handsome, eye-appealing package, they not only please the recipient, but relieve Mother from buying cake herself, or making one.

Keen competition in the bakery industry is making bakers realize the importance of such aids to increase their business. Festive-occasion cakes, beautifully boxed, are one means of adding a few extra pennies to standard cakes that build up to profitable business.

The Charles Freihofer Baking Co. of Albany and Troy, N. Y., is one company that is finding out the value of promoting festive-occasion cakes in a brand new special package for this promotion.

This new box is of two-piece folding construction, delivered flat to eliminate storage problems and easily set up by folding over the ends so that they lock themselves. A cellophane window gives visibility to the product and, according to the designer, helps to create its own protection. No driver or delivery man, looking through the cellophane window and seeing a beautifully decorated cake, will fail to give it the utmost protection while it is in his hands.

The box itself is made of heavy-gauge paperboard with four thicknesses on three sides of the box when the lid is on, and three thicknesses on the fourth side. This fourth side provides a drop-side feature when the lid is removed and enables the baker to place the cake in the box without marring any of the decoration or resorting to a ribbon or wax paper to lower it into the box. Each cake is placed on a heavy disk covered with a paper doily. Disks are cut to fit securely in the box, so that the cake does not slide around.

When the housewife receives the package and removes the lid, the drop side enables her to slide the cake on the paperboard disk in and out of the box without any damage. Any left-over portion of the cake may be easily placed back in the box if desired. Surface design is simple, with the baker's name as the only identification. The box can, therefore, be used for any type of cake. The boxes are said to compare favorably in price with other types of cake boxes, yet have the advantage of transparency and sturdy construction.

CREDIT: Box designed by Mildred Lucas, New York; supplied by Timely Packaging Associates, New York.



VISIBILITY of the cake pleases customers, makes drivers more careful in handling them.



SIDE-DROP permits the baker to put cake in easily and the housewife to take it out without marring. Securely fitting disk on which cake rests serves to keep the cake in position.

DELIVERED FLAT, the box is of two-piece construction and eliminates storage difficulties.



IMPROVED UNIT PACKAGES

Positioned printing and double-diagonal crimp seal give refinement

to many new packets for drug and toiletries powders and tablets



NEW FEATURES, exemplified by four new unit packages. All illustrate positioned printing. Note double-diagonal crimp on Bromo Seltzer and Lorate packets. Three "Vaseline" soaplessshampoo packets are sold in carton. Lorate packets are mounted in catch book for professional sampling. Anacin pack is for export; Bromo Seltzer is for fountain dispensers.

ncreasing demands for millions of unit packages in the drug, cosmetic and specialty food fields to sell tablets, powders, granules and similar preparations call for continued improvements in methods of producing such packages at high speed and low cost.

The unusual requirements for protection and appearance of packages to be used for products of these types demand the most efficient packaging. During the past decade much progress has been made, but each year sees more refinements in technique.

Several users of such packages now have on the market unit packages which incorporate a number of these new features. Among them are small unit packages of several Anacin tablets for export, a unit-dosage Bromo Seltzer packet for soda-fountain dispensers, professional samples of Lorate, a new vaginal douche in powder form, and new packets of "Vaseline" soapless shampoo, sold three to the carton, just introduced in limited areas by Chesebrough Mfg. Co., Cons'd.

First of the new features is the improvement in package design obtained through positioned printing on both sides of the package. This positioning is done

mechanically on newly designed equipment at speeds of 100 to 250 per minute by means of a device that controls registered printing, front and back, concurrent with the uniform roll feed and the welding together of two printed thermoplastic sheets. Heretofore, packages formed on similar patented machines did not have positioning, but repetitive designs which required no register. Mechanical control was adopted in preference to electronic control because of the increased speeds that may be achieved by the former, the creators of the machine say. There is no waiting for a scanner; the packages are formed continuously and in accurate register because of the mechanical feed device.

Some of these packages are also equipped with what is termed a double-diagonal crimp seal. According to the manufacturer of the package and the equipment for making it, this method of crimping assures a strong uniform seal on all four sides of the package, regardless of the direction in which the grain of the packaging film moves. Damaging vents through which moisture may be transmitted and avenues of escape for the product itself are thus said to be eliminated with this in-

novation. "Danger and disaster can usually be avoided by 'doubling the guard.' This is what occurs when the diagonal crimp is provided," says the package maker.

Other features of these packages are the patented, rounded corners, said to strengthen the package structure in that contents are prevented from wedging and causing any outward strain against the sealed edges of the unit. Rounded corners are also an improved consumer convenience, aiding the complete and rapid removal of the entire contents. A complete flange seal is also formed with one single operation which involves no folding, creasing or lapping of the packaging material. The flanged seal is also said to act as a cushion against impact and friction and to withstand the abuses of jostling in shipment and rough handling.

Materials for these packages have been selected, in each case, in accordance with the specific requirements of the products. The Anacin package is printed cellophane; the Bromo Seltzer package, a composite sheet of acetate, aluminum foil and vinyl; the "Vaseline" soapless shampoo package is laminated glassine. Most unusual is the Lorate package, formed of saran-coated paper. In this case the product required a barrier which would be impervious to the migration of the aromatics

in the essential oil. The Lorate powder is a very delicate pink color. This color, it is said, is imparted to the product by the aromatics in the oil. If allowed to escape, the product loses its pink color. The saran coating provides the protective element of the package that keeps the product from losing this color and also makes it resistant to water-vapor transmission.

New unit packages will also appear on the market soon, made of a Pliofilm and acetate combination. This material is expected to have many uses because of the special properties imparted by such a combined sheet. The acetate gives dimensional stability, while the Pliofilm provides a positive seal and product protection. Very interesting color effects may be obtained by use of color in the laminant for the two films. It is possible to have an opaque back panel for the printing of product and promotional information on the acetate exterior, while the front panel of the package is left transparent to allow the product to be visible.

CREDITS: Packages designed and manufactured by the Ivers-Lee Co., Newark, N. J. Printed cellophane, Shellmar Products Corp., Mount Vernon, Ohio. Acetate, aluminum foil and vinyl combination, and printed saran-coated paper and printed laminated glassine, The Dobeckmun Co., Cleveland, Ohio.

AYER ADOPTS THE TRANSPARENT FOLDING CARTON

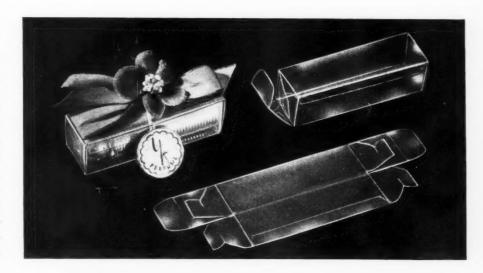
First to adopt commercially a completely transparent tuck-in, folding carton is Harriet Hubbard Ayer for a purse-sized flacon of "Yu" perfume. The carton, a new development (see Modern Packaging, Oct., 1947, p. 160), is made of cellulose acetate film laminated to vinyl film—the former giving the rigidity and the vinyl on the outside providing the folding endurance necessary for scoring. The carton is cut and scored similarly to a paperboard folding carton and may be shipped flat in the same way, as shown

the illustration. Harriet Hubbard Aver is setting up and filling the cartons manually, although the same type of container may be filled automatically. These new transparent folding cartons are said to compare very favorably in price with paperboard cartons, particularly in large volume runs, thereby giving the user the selling advantage of visibility packaging at

very economical cost. Since the containers are shipped flat, they also offer storage-space saving.

The transparent carton also offers a new way of affixing decorative ribbon, which may be tied effectively through a side of the carton opposite the flap ends.

CREDITS: Transparent folding carton, Troth, Bright, Page, Paoli, Pa.; material laminated by Standard Cap & Seal Corp., New York. Acetate film, Kodapak, Eastman Kodak Co., Rochester, N. Y. Vinyl film, Bakelite Corp., New York.







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An easel-back display card, printed in four colors, is being used to promote Smoky Ridge syrup, recently introduced by Illinois Food Products Co. It features a large-sized reproduction of the bottle and label. Bottle, Owens-Illinois Glass Co., Toledo. Label, Dennison Mfg. Co., Framingham, Mass. Closure, Crown Cork & Seal Co., Baltimore, Md.

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Designed for variety and chain store selling, this folding carton forms an eyecatching display for a unit of six Hi-Bright tumblers marketed by Federal Glass Co. Display, Cleveland Cartons Division, Robert Gair Co., Inc., New York.





This spiral display for Four Roses whiskey, one of a family of three designed for Frankfort Distillers, presents its merchandise in a compact, mass arrangement. Made of heavy paperboard and lithographed in eight colors, the display is constructed to carry 11 full bottles of liquor. The bouquet of roses, realistically reproduced, is die cut and mounted in several planes to give them third dimension. The unit is of a semi-permanent nature for display on counters and windows of retail stores and bars. Design and lithography, Consolidated Lithographing Corp., Brooklyn. Finisher, Mounting & Finishing Co., Inc., Brooklyn.

A die-cut folding paperboard carton, printed in red and blue, has been adopted by Wood & Selick, Inc., New York, for their new retail package of Nu-Corette cake topping, previously sold only in bulk to the bakery trade. The display holds 12 of the heat-sealed cellophane bags colorfully printed in four colors.

An acrylic "deodorant bar" holds complete line of X-Pel products. Bottles rest on shelf; opal jars fit in openings. Display, Plastics Arts Co., Milwaukee. Jars, metal caps, Hazel-Atlas Glass Co., Wheeling. Bottles, Foster-Forbes Glass Co. and Continental Glass Co. Plastic caps, Victor Cap Co.







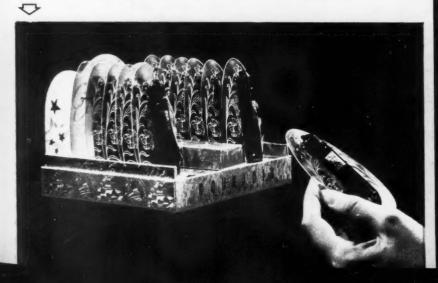
This tamperproof counter unit of paperboard holds 2-doz. Flight sun glasses. Six pairs are displayed on inside card with adjustable slots for different sizes. Storage compartment holds 18 individually packaged glasses. Top of display has mirror. Acetate windows are mounted loose to prevent bulging. Unit is shipped flat. Display, David Weil's Sons Lithographic Co., Brooklyn. Mounting, Graphic Mounting & Finishing Co., Brooklyn.

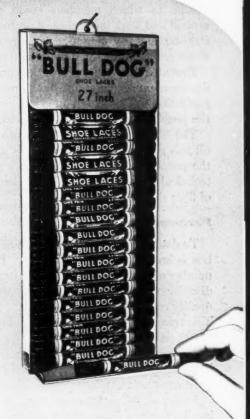
Gallery

A combination display-dispenser enabling self-service merchandising has been introduced by Conrad Mfg. Co. for "Bull Dog" shoe laces, formerly sold only to shoe manufacturers. It consists of a paperboard tray, completely sheathed in a cellulose acetate sleeve. Display made by Shaw-Randall Co., Pawtucket, R. I., of Celanese Lumarith.

Bas relief head of this three-dimensional easel display for Imperial pearls is formed of 20-gauge white acetate or vinyl sheet. Lips and eyes are masked and sprayed; openings at neckline permit use of actual string of pearls. Background is flocked paper with gold stamped letters and die cut to fit outline of head. Display, Acme Trans-Pak Co., Div. of Acme Paper Box Co., Chicago. Flocked paper, Veloursheen, Bulkley, Dunton & Co., New York.

The newest display package to be introduced by Bourjois is this box for holding 1 doz. flacons of No. 75/VE Evening in Paris perfume. Each flacon is mounted in a sheet of clear cellulose acetate on which a decorative floral design is printed. The 12 mounted flacons fit upright into a set-up box, six in each row. Cellulose acetate, Kodapak, Eastman Kodak Co., Rochester, N. Y.







SHIPPING CONTAINER STUDY

Progress report on fibre box and board industry's technical research

program to establish test specifications.

By W. B. LINCOLN, JR.*

For many years technicians in the fibre-box industry have felt the need for some central technical organization in which members could meet on common ground and work out technical problems peculiar to the industry and to conduct research programs beyond the scope practical for the individual company.

Recent trends and the technical problems of wartime developments highlighted the demand for such an organization. This has resulted in a general realization of the problem on the part of the industry management.

The Shipping Container Institute was organized to fill this gap. It was formed solely and exclusively for the purpose of conducting research and accumulating technical data on all phases of the manufacture and use of fibre shipping containers.

Performance tests

To determine how good a box must be or how good a box is implies testing procedures. For a considerable number of years there has been an increasing amount of discussion of "performance tests," their application to quality control and to the solution of packing problems. This term has been very loosely used and, like too many of our terms, is not definitive in character. All of the tests used evaluate some performance characteristics, so it is important to understand exactly what is meant by "performance tests."

As the term "performance test" is generally used, it implies the evaluation of the ability of the container to perform satisfactorily in service. It means determining whether the loaded container has the ability to meet the hazards of the test as distinguished from tests which evaluate the empty box or fabricated board only. For greatest value, performance tests must be tied in with the commodity being shipped and requirements must be established in keeping with the needs of each particular commodity and distribution methods used. Packing requirements for items susceptible to damage by compression could legitimately include compression performance requirements. Those subject to breakage could be required to withstand tests to determine the adequacy of the cushioning provided, etc. Only in this way can the effects of arrangement, design and the nature of contents be given full consideration. There is no one test that will give all the answers on the adequacy of any and all packs.

The establishment of sound performance tests and

standards for these tests must be based upon a foundation which involves:

1. Isolation and identification of the hazards shipping containers encounter in service.

2. A determination of the degree of severity of each of these hazards, preferably stated in fundamental engineering units.

3. The necessary instrumentation studies to develop and prove the suitability of testing devices and procedures as a means of evaluating container performance characteristics, using the term "performance" in the sense previously discussed.

TABLE 1—REPORTED CAUSES OF DAMAGE

| Item No. | Cause of damage | No. of boxes reported damaged | No. of boxes reported damaged by cause groups | % of total damaged |
|-------------|---|--|--|--------------------------|
| | Excessive sla | ck in load | | |
| 1 | Excessive lengthwise slack | 1,017 | 1.128 | 14.4 |
| 2 | Excessive crosswise slack Poor car pre | 111∫ eparation | 1,120 | 17.7 |
| 3 | Nails, wire, boards, straps | | | |
| | not removed | } | 642 | 8.2 |
| 4 | Dirty car | 8 | | |
| | Poor arrangem | , | 10 | |
| 5 | Poor arrangement of cargo | 346 | | |
| 6 | Partial layer | 145 | 491 | 6.3 |
| | Inadequate | bracing | | |
| 7 | Weak or broken bracing | 33) | | |
| 8 | Poor design of bracing | 678 | | |
| 9 | Poor car-door blocking | 310} | 1,158 | 14.8 |
| 10 | Poor bracing material | 13 | | |
| 11 | No bracing | 124 | | |
| | Cars needin | ng repair | | |
| 12 | Leaky car | 499 | | |
| 13 | Broken car walls | 25} | 681 | 8.7 |
| 14 | Broken floor or floor racks | 157 | | |
| | Rough ha | indling | | |
| 15 | Rough handling of car in | 1 | | |
| | transit | | 1,339 | 17.1 |
| 16 | Rough handling during | | | |
| | loading | | 176 | 2.2 |
| | Miscella | | | |
| 17 | General crushing, rubbing | 3 | | |
| | and punctures | | 559 | 7.1 |
| 18 | Crushing due to stacking | | 263 | 3.4 |
| 19 | Open manufacturer's joint | | 77 | 1.0 |
| 20 | Case flaps unsealed | | 1,311 | 16.8 |
| | Totals | | 7,825 | 100.0 |
| | % of total boxe | s shipped | | |

^{* 733,308} test boxes were in the cars covered by this tabulation.

^{*} Chairman, Technical Committee, Shipping Container Institute, New York, and Technical Manager, Inland Container Corp., Indianapolis, Ind. From a talk delivered before the Technical Assn. of the Pulp & Paper Industry, New York, Feb. 23, 1948.

Having this foundation, it is possible to determine:

(a) Characteristics and standards for materials, combined board, boxes and completed packs.

(b) The inter-relation between these various factors.

(c) The influence of fabrication practices in the box plant upon complete pack characteristics.

(d) The influence of design upon complete pack characteristics.

The scope of knowledge in many of these fields consists of many bits and pieces. However, you wonder whether these bits and pieces do not consist very largely of only portions of a great many jig-saw puzzles which have been scrambled together. In other words, there are so many of the pieces missing, you can't assemble any of the puzzles completely.

Having this unsatisfactory situation in mind, the Shipping Container Institute program has been dovetailed closely with investigations going forward under the auspices of the board groups of the industry. All this work is being done under standardized conditions which will permit maximum value to be obtained from the data being gathered as all the pieces will be parts of the same jig-saw puzzle.

Hazards to shipping containers

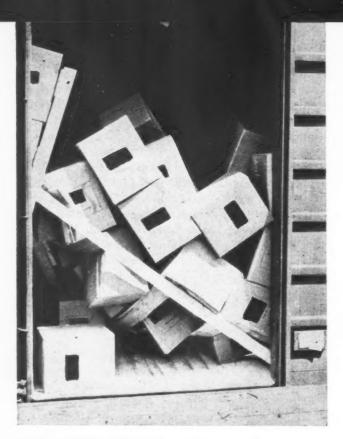
In every stage of packing and shipping, containers encounter hazards. While the basic stresses and impacts can be grouped under a few rather obvious classifications, little is known even today about the relative frequency of contact with specific hazards and their real contribution to claims. The claim data developed by the railroads throw very little significant light on the subject. There have been many investigations conducted, particularly with specific commodities. But they have been conducted independent of one another and little can be done to correlate the data obtained or to use it to solve similar problems elsewhere.

Realizing this situation and recognizing that an evaluation of hazards was basically fundamental in a program, the Shipping Container Institute developed its shipping test program to determine the hazards which are causing damage in shipment and the hazards which are causing claims to be filed. This data will be related to laboratory evaluations of the containers and product characteristics where this latter factor materially influenced the results.

In the work to date, it has been found that approximately 0.9% of the boxes shipped were damaged in some way during shipment. Of this total, approximately 0.2% were damaged sufficiently to cause the consignee to file damage claims with the railroads. In listing the reported causes for damage occurring during the shipment of these test cases, many different causes can be classified under various appropriate headings. Five tables show in detail the results of this test. All reported causes of damage are listed in Table 1. This

SWINGING STEEL GATES that lock together to form bulkheads and hinged shelves which make a second deck in the 100 Pennsylvania Railroad fast-freight merchandise service cars secure l.c.l. shipments from damage. Such devices greatly reduce the causes of damage en route. They may be swung to the sides of the car and locked flush against the side when the cars are used for general service. The cars are part of orders for 2,100 box-cars now rolling out of Pennsylvania's shops. Onethird longer than the standard freight car, they will carry double the average loading in the railroad's freight cars.





INSUFFICIENT BRACING caused a load of soapless detergent to arrive in this condition when car door was opened at final destination.

shows the number of boxes reported damaged by specific cause, the number of boxes reported damaged, arranged by cause groups, and the percentage of the total damaged by groups.

These data have been further broken down to show the causes of damage which are considered to be primarily the responsibility of, or at least under a certain degree of control by, the three groups concerned—boxmakers, shippers and railroads.

Table 2 shows the reported causes of damage considered to be primarily under the railroads' control. Table 3 covers the reported causes of damage considered to be primarily under the shipper's control. Table 4 shows the reported causes of damage considered to be primarily dependent on box quality and therefore under the boxmaker's control to a degree at least. Table 5

TABLE 2—REPORTED CAUSES OF DAMAGE CONSIDERED PRIMARILY UNDER RAILROADS' CONTROL

| Item No. | Cause of damage | No. of boxes reported damaged | % of total railroad re- sponsibility |
|-------------|-----------------------------|-------------------------------------|--|
| 3 | Nails, wire, boards, straps | | |
| | not removed | 634 | 23.8 |
| 4 | Dirty car | 8 | . 3 |
| 12 | Leaky car | 499 | 18.8 |
| 13 | Broken car walls | 25 | . 9 |
| 14 | Broken floor or floor racks | 157 | 5.9 |
| 15 | Rough handling in transit | 1,339 | 50.3 |
| | Totals | 2,662 | 100.0 |
| | % of total damage reported | d 34.0 | |

TABLE 3—REPORTED CAUSES OF DAMAGE CONSIDERED PRIMARILY UNDER SHIPPERS' CONTROL

| Item no. | Cause of damage | No. of boxes reported damaged | % of total shippers' responsibility |
|-------------|-------------------------------|-------------------------------------|---|
| 1- 2 | Excessive slack in load | 1,128 | 26.4 |
| 5- 6 | Poor arrangement of cargo | 491 | 11.5 |
| 7-11 | Inadequate bracing | 1,158 | 27.2 |
| 16 | Rough handling during loading | 176 | 4.1 |
| 20 | Case flaps unsealed | 1,311 | 30.8 |
| | Totals | 4,264 | 100.0 |
| | % of total damage reported | 54.5% | |

covers the reported causes of damage to which boxmakers, shippers and railroads might have jointly contributed. This list includes items which it is difficult to say with finality are the responsibility of a single agency. However, their classifications, as given in preceding tables, are believed to be fundamentally correct as to primary responsibility

A careful examination of the tables clearly indicates the most fertile causes of damage and the appropriate action to reduce the resulting waste.

Extensive damage result of multiple causes

Upon analysis of detailed data on which these tables were based, it becomes quite apparent that cars in fair or poor condition at destination were fair or poor as the result of a multiplicity of causes. On the average, half of the cars arriving with their contents in good condition had no damage at all. The other half had minor damage from a single cause only, hence these good cars averaged roughly one-half damage cause per car. Fair cars averaged one and one-half damage causes per car and poor cars, two damage causes per car.

Certain damage causes are more serious than others. Certain of these causes result almost invariably in damage to the shipment. To ignore such a cause at the time of loading is therefore practically compounding a felony. In this catagory, broken floor racks, while not occurring frequently, in every instance resulted in a claim being filed. Leaky cars likewise tended to produce a high incidence of claims. Actually, claims were filed on two-thirds of the recorded leaky cars. While nails, wire, boards and straps result in widespread damage, these causes do not generally lead to serious claims. However, they occur so frequently that this group of causes leads the list in the causes of damages initiating claims. Other damage causes resulting in a high percentage of claims are excessive lengthwise slack, excessive crosswise slack, poor car-door blocking, no bracing, crushing due to stacking and rough handling of cars in transit.

Shippers and railroads can reduce claims

From a study of the number of cases damaged and the responsibility of various damage causes, it appears that the shipper and the railroads are in a position to effect the major possible reduction in claims. The boxmaker

shares in this position, of course, but not so significantly, as his best efforts can be nullified by poor shipping practices. For example, what possible change in box quality could overcome the damage resulting from careless failure to remove a projecting nail in the car wall or repair a leaky roof?

Of approximately 750,000 cases shipped, a little more than 7,800 cases were damaged. A third of the damaged cases were damaged as a result of leaky cars, broken car walls, broken floors and racks, general crushing and rough handling in transit—items which are more controllable by the railroads than others. More than half (54.4%) of the total cases damaged were damaged as a result of excessive slack in one or more directions, the presence of nails, wires, straps, etc., poor arrangement, weak or inadequate bracing or car-door blocking, or no bracing at all, flaps unsealed and related causes largely under control of the shipper.

The boxmaker's responsibility

Of the total damage reported, 11.5% might be considered primarily dependent on box quality, although only 1% can be allocated to the boxmaker without question. This is not trying to evade acknowledgment of the contribution of the boxmaker. Some 42.8% of the reported damage falls in the catagory to which all three groups—boxmakers, shippers and railroads—might have individually or jointly contributed (see Table 5).

There is no question but that weak boxes contributed to the degree of damage sustained in many instances. Shipper responsibility, however, includes that of obtaining adequate boxes of good quality. It is part of the shipper's responsibility to deal with reliable, technically competent suppliers who are able to aid in the solution of individual problems and furnish adequate boxes. Insofar as it is the shipper's responsibility to maintain such sources of supply, there is no hesitation about including some of these points, subject to correction by the shipper, which might otherwise be considered the responsibility of the boxmaker.

Need for bracing facilities

The question of who is responsible for what poses quite a question. The shipper is blamed for poor door blocking and inadequate bracing of loads, but the railroads are far from blameless in this connection.

TABLE 4—REPORTED CAUSES OF DAMAGE CONSIDERED PRIMARILY DEPENDENT ON BOX OUALITY

| Ilem no. | Cause of damage | No. of boxes reported damaged | % of total boxmakers' responsibility |
|-------------|----------------------------|-------------------------------------|--|
| 17 | General crushing, rubbing | | |
| | and punctures | 559 | 62.2 |
| 18 | Crushing due to stacking | 263 | 29.3 |
| 19 | Open manufacturers' joint | 77 | 8.5 |
| | Totals | 899 | 100.0 |
| | % of total damage reported | 1 11.5% | |

TABLE 5—REPORTED CAUSES OF DAMAGE TO WHICH BOXMAKERS, SHIPPERS AND RAILROADS MIGHT HAVE JOINTLY CONTRIBUTED

| Item no. | Cause of damage | No. of boxes reported damaged | % of total |
|-------------|----------------------------------|-------------------------------------|---------------|
| 1 | Excessive lengthwise slack | 1,017 | 30.4 |
| 15 | Rough handling of car in transit | 1,339 | 39.9 |
| 16 | Rough handling during loading | 176 | 5.2 |
| 17 | General crushing, rubbing and | | |
| | punctures | 559 | 16.7 |
| 18 | Crushing due to stacking | 263 | 7.8 |
| | | - | |
| | Totals | 3,354 | 100.0 |
| | % of total damage reported | 42.8% | |

Freight cars should be equipped with some form of permanently available flush door blocking as well as adjustable bulkheads which could be readily moved and fastened into position to break bulk on carloads or to segregate l.c.l. shipments. It seems unsound economically for every shipper to provide his own car-door bracing, bulkheads, etc., using valuable raw materials and labor for what, all too often, proves to be an inadequate makeshift for the shortcomings in car design. This work delays the turn-around of cars and when consideration is given to all of the negative aspects of the historial approach to this problem, it seems that making such accessories a permanent part of the car equipment, just as are the floor racks in a refrigerator car or the blocking and bracing attachments in automobile cars, would result in tremendous savings for both railroads and shippers, not to mention (Continued on page 280)

> DAMAGE IN STOP-OVER cars is often high because shippers fail to erect partitioning bulkheads for separate loads or because the first consignee fails to level off remaining load. New freight cars, properly equipped with bracing, eliminate the occurrence of these hazards.



BEST FOLDING BOXES

1948 awards are made by the Folding Paper Box Assn.

for merchandising appeal, construction and originality



HEXAGONAL display box for Bogay "Mysté Mystimizer," a low-pressure aerosol atomizer of perfume, is of three-piece, tuck-in construction; the box base is equipped with a riser piece, a die-cut platform and a telescope lid.

PRINTERS STARTS

COLUMN STARTS

COLU

Chosen by vote of members attending the 1948 annual meeting of the Folding Paper Box Assn. of America at Chicago last month, the display package for Bogay "Mysté Mystimizer," a low-pressure aerosol atomizer of perfume, was designated the grand prize winner of the annual box competition staged in conjunction with the FPBA meeting. Winning boxes in each of three categories had previously been selected by a panel of four judges and were on display during the meeting.

The grand prize winner was made by Richardson-Taylor-Globe Corp., Cincinnati, and designed by Lea Congdon of Lea-Tek Studios, Chicago. The folding box holds an atomizer of the low-pressure aerosol type and is of hexagonal three-piece tuck-in construction: base, with riser-piece flap for display, simulating a spray of mist; circular die-cut platform to hold the atomizer; telescope cover fits over complete package. Dealer can display the package open or closed. Colors are striking black and gold with orchid in full color on the top. Box is shipped flat to manufacturer, who assembles it. Dealer merely removes lid to display it open. The aerosol atomizer is procelain finished, also developed by Lea-Tek. Gold foil labels for body and neck were made by Chicago Tablet & Ticket Co.

Boxes submitted for the competition were judged on the basis of merchandising appeal, construction and originality of product packaged. To qualify for entry, they must have been manufactured by a member of the association, designed by the member submitting the entry, the customer or an outside designing agency and produced for the first time after Jan. 1, 1947. Another requirement was that no previous winner could be entered in the competition again.

First-award winner for merchandising appeal was a group of boxes for Occident cake-mix products, made by Waldorf Paper Products Co. for the Russell Miller Milling Co. Second award in this category went to the Universal Blanket box made for Landers Frary & Clark by National Folding Box Co., Inc., (See "Ad Box" page 118 in this issue) and third honors to the Trenton fishing-lure box made by C. W. Zumbiel Co. for Trenton Mfg. Co.

Nine boxes received honorable mention for merchan-

BLANKET BOX is described on page 118 of this issue. Cake-mix packages have striking eye appeal, complete directions on back panel. Simplicity and wood-grain pattern distinguish display and window packages for fishing tackle. dising appeal. Products for which these containers are used, the name of the box manufacturer and the name of the customer on these boxes were as follows:

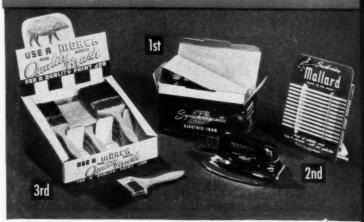
Easter egg carton, Paper & Corrugated Specialties Co., Heidelberger Confectionery Co.; diapers, Robertson Paper Box Co., Dan River Mills, Inc.; golf balls, C. W. Zumbiel Co., Sports Products, Inc.; hair brush, Standard Paper Box Corp., Modglin, Inc.; baby blankets, Robert Gair Co., Inc., Cleveland Cartons Div., for Fleer Associates; nylon hosiery, National Folding Box Co., Inc., Lehigh Foundries; pencils, Bradley & Gilbert Co., Mallard Pencil Co.; Rem, Guilford Folding Box Co., Maryland Pharmaceutical Co.; drill sets, Gardner-Richardson Co., Cleveland Twist Drill Co.

For ingenuity of package construction, a folding box for the Kenmore electric iron, produced for Sears, Roebuck & Co. by Gardner Richardson Co., received top ranking. It was followed by a pencil box made by Bradley & Gilbert Co. for Mallard Pencil Co., with third award going to a brush display produced by Fleishhacker Paper Box Co. for the Morck Div. of Pittsburgh Plate Glass Co.

Honorable mentions in the construction division of the competition went to an Easter-egg carton made for Heidelberger Confectionery Co. by Paper & Corrugated Specialities Co.; coffeemaker box produced by Gair Cartons Div., Robert Gair Co., Inc., for the Silex Co.; MacGregor golf-ball box made for Sports Products Co. by C. W. Zumbiel Co.; Lustre-Creme package for Colgate-Palmolive-Peet Co. by National Folding Box Co., Inc.; Pond's beauty box by Ohio Boxboard Co. for Lamont, Corliss & Co.; Mildoom box made for Sapolin Co. by Robert Gair Co., Inc., Eastern States Div., and knife-sharpener box produced for Kennametal, Inc., by Gardner-Richardson Co.

The phase of the competition based on originality of product packaged brought forth some interesting entries. First award in this division was won by a unique die-cut folding box which holds eight sanitary crab shells and two ¹/₂-lb. cans of deviled crab meat, providing a deviled-crab dinner for eight. This package was produced by Atlanta Paper Co. for the Blue Channel Corp., Port Royal, S. C. Second award for originality of product went to a door-chime package made by National Folding Box Co., Inc., for Edwards & Co., Inc., with third honors to (Continued on page 284)

For ingenuity of construction



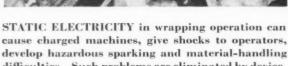
PAINT BRUSH display box has sturdy interior construction and a tilted front to give it an easel effect. The electric iron pre-pack incorporates modern principles of box engineering. Pencil display box has a storage compartment from which the pencils may be dispensed by gravity.

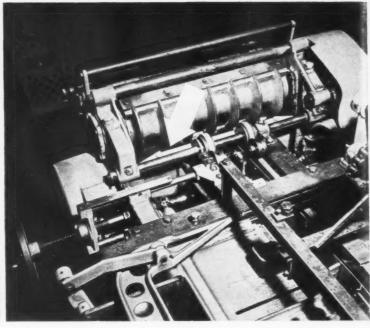




CRAB SHELLS and cans of crab meat are in box with acetate windows through which clever combination is visible. Door-knocker and chime set makes an effective merchandising team. Beautiful arrangement of Hawaiian flowers is illustrated in the photograph above.







STATIC ELECTRICITY in wrapping operation can STATIC ELIMINATOR consists of shielded bar supporting strip cause charged machines, give shocks to operators, of radioactive material at the point on the machine where develop hazardous sparking and material-handling static charges tend to be built up. Air is ionized and acts difficulties. Such problems are eliminated by device. as conductor to draw off generated static charges harmlessly.

STATIC ELIMINATOR

American Stores Co. solves the static electricity problem and adopts acetate film for its machine-wrapped tomato boats

he troublesome problem of static electricity in the handling of acetate film in the pre-packaging of fruits and vegetables has been solved by American Stores Co., Philadelphia, by equipping wrapping machines with a simple static eliminator device.

One of the largest food chains in the East, this company packages large quantities of tomatoes in boats overwrapped with transparent film. Recently the company discovered that the type of film it was using was air-tight and did not permit the tomatoes to breathe sufficiently.

Two packaging machines at one of the company's warehouses were changed over to acetate film-similar in appearance, but more porous-which allowed for necessary breathing. But the new film developed a new handling difficulty-static electricity.

The original sheeting had not generated static electricity, but the new one did, with all the problems of charged machines that gave uncomfortable electric shocks to operators, developed hazardous sparking and material-handling difficulties.

The trouble was solved by a simple static eliminator which involves no electric power use, no wiring, no gas flame, no maintenance costs.

The device consists of a shielded bar supporting a strip of radioactive material at the point on the machine where the static charges tend to build up. The air at this point is ionized by the alpha rays from the radioactive source and acts as a conductor to draw off the charges harmlessly as they are generated.

Action of the static eliminator is permanent. Only 50% of its alpha-ray generating power is lost in 1,600 years, it is claimed.

Installation of the device ended the static problems on the two machines completely according to George Macaw, superintendent of the tomato room. Now American Stores is using the new devices in other warehouses and has additional eliminators on order.

CREDITS: "Ionotron" static eliminator, U. S. Radium Corp., New York. Wrapping machine, Packaging Machinery Co., East Longmeadow, Mass. Acetate film, "Lumarith," Celanese Plastics Corp., New York.



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Quality in workmanship Quality in protection Quality in design



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Dominion Paper Box Company Ltd., 469-483 King St. W., Toronto 2, Canada



Whether a star be born or made, the qualities that mark one usually stem in large part from specialization. Not in the sense of limited versatility, but specialization in the sense of particularized effort.

Lowe Paper Company makes clay coated boxboard . . . period! By concentrated devotion to this one class of paper product, which it manufactures on a custom basis for each customer, the result is a boxboard star of superlative merit . . . and that costs little more than a "chorus line" product.

Companies seeking a hit show on the sales counter can get an eyeful by looking over the Ridgelo line . . . the line that helped so many cartons become prize winners, the line that is helping so many sales curves maintain an upward trend.





Ridgelo distinctively combines tempered resiliency — for fast forming and glueing, with sturdy rigidity — for sidewall strength.



Carefully conforming to each customer's specifications, Ridgelo assures peas-in-a-pod uniformity... even on years' old repeat orders.



Integral pigmentation of colored types of Ridgelo spells remarkable resistance to light, is precisely controlled for perfect matching.

MADE AT RIDGEFIELD, N. J. . BY LOWE PAPER COMPANY



H. B. Royce, Detroit Norman A. Buist, Los Angeles A. E. Kellogg, St. Louis Philip Rudolph & Sons, Inc., Philadelphia

stops the eye ... starts the sale



PACK TO ATTRACT IN Maryland Blue

Products packed sell



NOT just a container—but valuable selling and merchandising features. That's what you get when you pack in rich, royal, "eye-stopping" Maryland Blue Glass. Yes, Maryland Blue has played an important part in the sales success of many famous products. Here's why:

BLUE MAKES YOUR PRODUCT EASIER TO SEE.

BLUE MAKES YOUR PRODUCT EASIER TO REMEMBER.

BLUE MAKES YOUR PRODUCT SMARTLY MODERN.

BLUE INSURES RICH, DISTINCTIVE APPEARANCE.

BLUE STANDS OUT, ASSURES BETTER DISPLAY.

BLUE ADVERTISES YOUR PRODUCT IN THE HOME.

BLUE BUILDS PROFITS, STEPS UP REPEAT SALES.

PACK TO ATTRACT IN Maryland Blue

ALSO AVAILABLE IN CLEAR GLASS



Write today... tell us the nature of your product and the sizes in which it is packed... and let us send you samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, we'll be glad to create a special design for your exclusive use.

MARYLAND GLASS CORP.
BALTIMORE 30, MD.

Pictured on the preceding page

are just a few of the handsome stock designs. This diagram makes them easy to identify.

1. Cabinet Square - in ½ oz. to 32 oz. sizes

- 2. Chesapeake Oval in 4 oz. to 32 oz. sizes
- 3. Toilet Oval - in ½ oz. to 8 oz. sizes
- 4. Maryland Oval in 178 dram to 32 oz. sizes
- 5. Squat Jar - in 25/16 dram to 18 cz. sizes

STEP UP TO OUR BAR! (Adhesive information)

No..you can't drink it..but you'll probably learn a lot about adhesives you never knew before! So, make a note right now to see the spectacular new PAISLEY Exhibit at the Packaging Show in Cleveland! Stop at our "Adhesive Information Bar." See the glass containers of new adhesives developed during the past year. Get copies of our valuable Technical Service Bulletins and Laboratory Reports on adhesives created by our capable research staff.

The Chicago and New York Technical Staff will be here to lend you every possible aid. And, make it a point to meet the group of twenty Paisley officials and sales representatives. Let them give you a better understanding of "PAISLEY SCIENTIFIC ADHE-SIVE SERVICE" and just what it can mean TO YOU! Above all . . get the "Paisley Adhesive Operation Data Sheet". If you do not expect to attend, the coupon mailed today will bring you a copy at once.

SEND FOR THIS DATA SHEET NOW!

There's a laboratory.

There's a laboratory-developed, tested and controlled PAISLEY scientifically designed Adhesive for practically every fabricating, manufacturing, product labeling and sealing operation. Buy adhesives the scientific way, Send for an Adhesive Operation Data Sheet, Fill in and return it to our laboratory for analysis and recommendations. Get the ONE There's no obligation. Use the coupon below!

TEAR OUT—PASTE ON LETTERHEAD AND MAIL!

PAISLEY PRODUCTS INC. 1770 Canalport Ave., Chicago 16, III. 630 W. 51st St., New York 19, M.Y. Gentlemen: Please send me free Adhesive WE USE ADHESIVES FOR:

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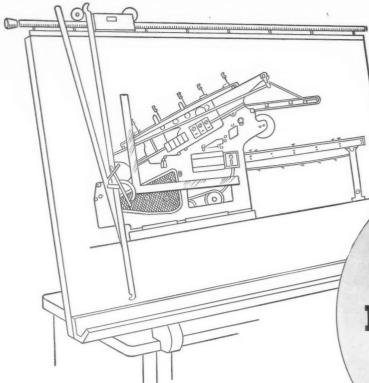
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TECHNICAL

ENGINEERING • METHODS • TESTING

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VACUUM TESTER

ith the wide use of vacuum packing for various types of commodities, the need for an adequate device to indicate whether a proper degree of vacuum exists inside the package has been apparent.

There are several physical phenomena which might be used to indicate the pressure inside the enclosed container.

Many efforts to detect the vacuum by means of a glow discharge existing in the reduced pressure inside the container have been tried, but these methods would function only with a glass container and also with materials in which a very high degree of evacuation is possible. Several methods involving measurement of the deformation of the container with the reduced pressure

* Consulting physicist, Wm. S. Scull Co., Camden, N. J.

1. CRITERION is the intensity of light beam from source (b) which is reflected from jar cap to screen (c) and photocell (n). Existence of proper vacuum causes slight concavity in jar cap as in B, which focuses reflected beam and activates photocell, permitting container to pass. If the cap is flat as in A, insufficient light gets through the screen to activate photocell and the container is then rejected.

FIGURE 1

New equipment for production-line use operates on electro-optical principles, accepting or rejecting the containers according to the degree of deformation of the tops.

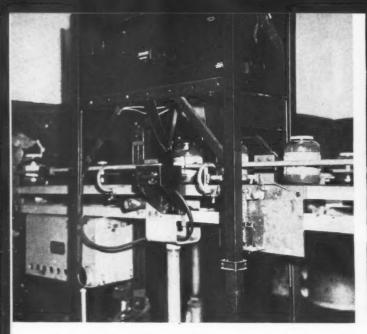
By JOSEPH RAZEK, Ph.D.*

inside have also been tried; such methods have the advantage that they can be made to operate either on a glass container with some portion, such as the cap, slightly deformable, or on a metal can.

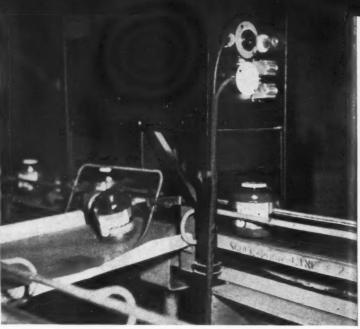
One method which showed considerable promise and which was exploited to some extent by the writer was based on the fact that the cap on a glass container in which the pressure was below atmospheric was under a considerable tensile stress due to the external atmospheric pressure. This additional tensile stress resulted in a higher natural period than was the case when both sides were exposed to the same pressure. This method had been used manually by listening to the sound which resulted when the cap was tapped with a small stick. The pitch of the sound with a properly evacuated container was very much higher than would be the case if the inside of the container were at atmospheric pressure. An automatic device using this principle was built, but it required rather elaborate electronic equipment and, furthermore, close contact with the cap and testing equipment was required. This latter requirement appreciably slowed down the maximum speed of testing.

Several vacuum testers have been tried in which the concavity which results in either the metal cap on the glass container or on the upper part of the can due to reduced pressure is used as the operating phenomenon. In one device, the depression is continuously measured by means of a light-weight finger which indicates the

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2. FRONT VIEW of electronic vacuum-testing unit, showing solenoid rejector and star-wheel jar separator. Jars go from right to left. Jar in front of solenoid is in inspection position. Unit has normal operating rate of 200 jars per min.; can go to 400.



3. JAR BEING EJECTED by solenoid. Jar came through without a cap; blur above it is coffee thrown from jar when struck by ejector mechanism. Rectangular box underslung from main frame directly over jar position carries locating photocell. Counter on side totalizes rejected and passed jars.

presence or absence of the required concavity. A disadvantage of this device is that, again, close physical contact with the container under test is required and, also, slight differences in height of the containers may introduce substantial errors.

Improved optical method

An optical method which eliminates this defect has been devised by the writer and a device based on this principle is in successful operation at the Camden plant of the Wm. S. Scull Co. The principle of operation is extremely simple and is illustrated by Fig. 1. In A is shown a cross-section of a cap on a glass jar in which the internal pressure is approximately atmospheric and the upper portion of the cap is essentially flat. If light from source (b) falls on the cap, it will be reflected in accordance with the law of reflection and the intensity on screen (c) will be essentially constant. It is not necessary that the outer portion of the cap be highly polished, it being only necessary that a fair degree of light be reflected from it, such as might be reflected from a lacquered surface.

If the container is evacuated properly, the external atmospheric pressure will cause a concavity to result in the upper portion of the cap, as shown in B of Fig. 1. The amount of this concavity will depend upon the thickness of the cap material and also on the degree of evacuation. If now essentially parallel light from the source (b) falls on such a concave surface, this surface will act as a crude concave mirror resulting in a substantial focusing action on the screen (c). If this screen is placed somewhere near the approximate focus of this concave surface, there will be a substantial increase in intensity at a limited area on the screen (c). With an ordinary cap, such as is used in coffee jars, the focal

area is about $^{1/2}$ in. in diameter and the local intensity is approximately tenfold that which exists in the case of of the flat cap shown in A of Fig 1. It is obvious from this that no physical contact with the jar is required and, since the focal region is quite broad, small changes in the height of the jar will be of no particular consequence.

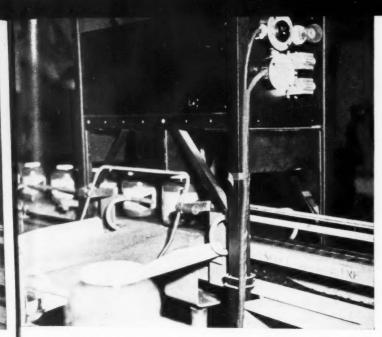
The practical installation of this device at the Scull company is illustrated in the above photographs (Figs. 2, 3 and 4).

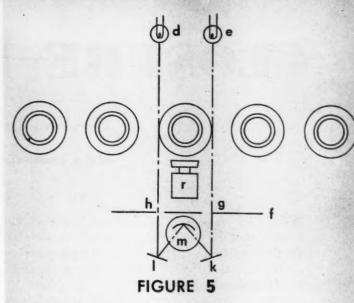
The equipment is mounted over a conveyor belt just ahead of the packing table from which the jars are packed into the shipping cases.

In all inspection equipment of this type, it is desirable that the equipment be designed so that failure of any element will result in a continuous rejection. For the most part, in the design of the device about to be described, this end has been attained. The actual device consists of a means for rejecting from the conveyor belt at a high rate of speed any jar which has not been properly evacuated. The installed device has been operated with a fair degree of reliability as fast as 400 jars per min., although the normal operating rate is about 200 jars per min.

Description of equipment

In more detail, the device consists of a solenoid-operated rejector designed to reject every jar which comes before it unless that jar is accompanied by a bright spot on the focusing screen (c) in Fig. 1. This is accomplished by the arrangement shown schematically in Fig. 5. An appropriate star wheel mounted just ahead of the test equipment makes certain that the jars are spaced at least 1/2 in. apart. As the jars move on the conveyor belt, light from two light sources (d) and





4. PASSED by electronic eye, jars moving off to the left 5. ARRANGEMENT of positioning elements. Light have shown the proper degree of concavity in their caps. Passing of jar depends on concentration of light over screen opening. Gate of rejection opening is normally open, except when line is stopped; this feature is optional.

beams from sources (d) and (e), passing through slits (h) and (g) and reflected to photocell (m), are cut off the instant container comes into exact position. Container will be pushed out by rejector (r) unless concentrated beam cancels signal.

e) shines past the sides of the jar onto a screen (f) containing two slits (g and h). These two slits are arranged so that when a jar is directly centered between these slits, both slits are just inside the shadow of the respective sides of the jar. This extinguishes the light which normally enters slits g and h from the light sources d and e. This light falls on the mirrors l and kand is reflected to the active surface of a photocell, m. The extinguishing of all the light which happens when the jar is exactly centered causes a change in the signal sent out by the photocell m, which in turn activates the solenoid-operated rejector (r). In other words, each jar that comes in front of the rejector would be rejected at the instant when it blanks off both slits h and g. However, a second photocell mounted just beyond a small opening in the screen shown in Fig. 1 is in position to send a canceling signal to the solenoid. If, therefore, the jar which has come directly in front of the rejector also carries with it a concave cap, which causes a substantial increase in the light falling on photocell (n) mounted just above screen (c) in Fig. 1-B, the rejection signal will not be sent to the solenoid rejector and the jar will remain on the conveyor.

Since the passing of any jar depends on the concentration of light over the opening in screen (c), this system will reject any jar which should happen to get through without any cap or with a cap which is not reasonably flat on the container. With screw-top caps in particular, it sometimes happens that the capping machine starts the cap crooked and, even though the vacuum may have held for a short while, such a jar should be rejected. Since such a cap would not allow the concentrated beam to strike the aperture in the screen (c) at the proper time, such a jar would be rejected.

The rejector is operated by a solenoid which in turn

is supplied by two FG95 thyratrons arranged in push-The whole unit is operated from 120-volt mains with the usual protecting devices—time-delay relays, etc.—which are required in the proper design of equipment of this character.

Ease of installation and use

In operation, about the only difficulty which must be guarded against is the maintenance of a reasonable degree of cleanliness on the various glass surfaces. Deposits of dust on the glass plates over the aperture in screen (c) in Fig. 1 and over the slits g and h in screen f of Fig. 5 would gradually reduce the available signals below the safe operating point.

As at present designed and built, this equipment does not require any very careful adjusting or lining up beyond the original installation. It is believed that the system adequately provides for an inspection of the vacuum system and obviously can be applied not only to glass jars, but to metal containers as well. To accommodate different types of containers, it is only necessary to change the spacing between the slits g and h, depending on the size of the container, and the height of screen (c), which depends on the diameter and thickness of the concave surface. Again, since the focal adjustment of the screen (c) is not very critical, a very rough setting will be entirely adequate.

This equipment can be installed on any belt-conveyor system and the only elements which need to be attached to the conveyor are the star wheel to insure spacing of the containers and the rejector. All the other equipment is mounted in a single box which is arranged to straddle the conveyor-belt system. This design makes installation and moving of the equipment very simple.

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CLOSURE LINERS

A review of the essential basic requirements of liner facings

and a presentation of comparative data. By J. M. WHEATON*

The chief purpose of closures—whether metal or molded, screw cap, lug cap, spun-on or crown—is to hold the liner firmly against the glass-sealing surface. It is the liner that forms the seal; hence no closure is any better than its liner.

Much work has been done in the past in many laboratories on recommending liners for specific products. Not as much work has been done on establishing the fundamentals governing this liner selection.

Recognizing this fact, the Owens-Illinois Glass Co. four years ago established a liner research group to obtain fundamental data. This research, directed by F. G. Pellett and assisted by M. E. Smith of our Packaging Research Division, is throwing further light on the factors that determine liner performance.

One of the things this work has taught us is not to jump too readily to new liner facings on the basis of a few tests showing superiority. The questions are: "What tests?" "How conducted?" and "Have all factors been considered?"

An organized approach has led our investigators to segregate the various liner-requirement factors and to study them one by one. A partial list of these essential factors follows:

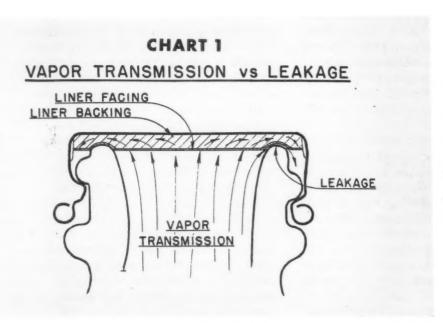
* Manager, Technical Development, Packaging Research Division, Owens-Illinois Glass Co., Toledo, Ohio.

- 1. Low water-vapor transmission.
- 2. Low alcohol-vapor transmission.
- 3. Resistance to leakage.
- 4. Adequate chemical resistance.
- 5. Freedom from pinholes.
- 6. Low permeability to essential oils and flavors.
- 7. Lack of odor or flavor.
- 8. Low solvent transmission.
- 9. Non-adhesion to glass.
- 10. Non-toxicity.

11. Others of less general importance, but of specific importance to certain products (for example, transmission of wet CO₂ in the case of carbonated beverages).

There is another factor that always hovers in the background—cost. A certain amount of common sense must be used. For example, one company is manufacturing a material with exceptionally low water-vapor transmission and extremely high chemical resistance, but at the present time its cost is somewhere around \$20 per lb. It is obvious that we cannot expect anyone to use this as a liner material. At the other extreme, however, we have seen orders placed for caps using mediocre liners merely to save 10 cents per thousand.

The difference between vapor transmission and leakage can best be illustrated by a sketch (Chart 1) which shows a cross-sectional view of a cap, liner and glass



ROUTE traveled by vapors is shown by arrows to be through liner facing into the backing, to edge of the liner, then along the cap threads to the atmosphere. Charts on opposite page show transmission of 100-proof alcohol using several liner facings and of products containing 50% alcohol after 1-yr. storage.

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finish. The liner is divided into two parts—the facing, which is in contact with the liquid, and the backing, used for cushion. In Chart 1 the route traveled by water or other vapors is shown by the arrows to be through the facing into the backing and thus to the edge of the liner. Vapors then pass along the cap threads to the atmosphere.

Leakage is an entirely different factor. This occurs between the glass-sealing surface and the liner, as illustrated. The facing must have physical properties of such a nature as will seal the normal variations occurring in the glass surface. In effect, the facing must bury itself in the microscopic hills and valleys in the glass and the contact must be such that capillary action is prevented. Because of this requirement, we must test the cap on the bottle. We cannot rely on water-vapor transmission obtained by the standard cup test.

Considerable study has been given to the possibility of using coated aluminum foils as liner materials for screw-closure use. Theoretically, aluminum foil provides a perfect barrier against vapors. When merely water-vapor or alcohol-vapor transmission is considered, some coated aluminum foils appear very excellent in the many tests we have conducted. Chart 2 shows the package transmission of 100-proof alcohol using several liner facings—a vinyl polymer, an alkyd-modified urea, polyethylene and a pulp-coated aluminum foil. The loss is shown in milligrams per day at 100 deg. F. using a 28-mm. finish.

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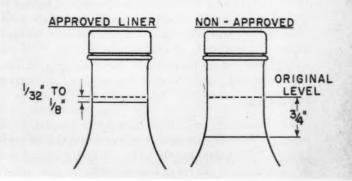
Note that the loss for coated aluminum foil is practically zero. Yet when other tests are considered, it is quickly evident that the material in its present form is not suitable for some uses because of the difficulty in forming a consistently leakproof seal against glass. This is shown by occasional high and irregular losses when stored inverted. Good water-vapor transmission alone is not a sufficient answer; all other requirements must be met.

Another example of a liner that appears to meet all requirements, but should be considered with caution, is polyethylene. Chart 2 shows an alcohol-vapor transmission of 6 mg. per day, which is very low. In fact, a check will show that polyethylene conforms to eight out of 10 of the essential requirements shown above—but how about requirements No. 6 and No. 8: low permeability to essential oils and flavors and low solvent transmission? Here is where films of polyethylene fail to meet requirements in our tests. Two common products that have been found here to permeate readily polyethylene films in this manner are oil of peppermint and oil of juniper. This is a point that could easily be missed in ordinary liner-testing procedures and again illustrates the fact that more than one or two things must be considered in choosing a liner for your product.

Reference to Chart 2 shows that the alcohol-vapor transmission of alkyd-modified urea is approximately 99 mg. per day. Discussion of milligram loss may be confusing. What you want to know is how this affects your product from the standpoint of slack fill or other troubles. Chart 3 shows what happens when products

TRANSMISSION IOO PROOF ALCOHOL TRANSMISSION OF THE POLYMEN POLYETHYLENE POLYMER FOIL

APPEARANCE OF SLACK FILL (EFFECT OF ONE YEAR STORAGE)



containing 50% alcohol are stored for a year under normal conditions. The bottle on the left has a closure with an approved liner and the bottle on the right is capped with alkyd-modified urea liner. Note that the fill point has dropped $^3/_4$ in. in the latter case. This is not just theory. The illustration is based on an actual case history recorded in our files.

During the past few years many new resins have emerged as possibilities for closure-liner use. All of the promising ones are under study by leading suppliers.

In the final analysis, the choice of liner is the user's responsibility. He is the one who knows the particular requirements of his product and will suffer the most if something goes wrong. The closure manufacturer can be of great assistance, however, in providing the fundamental data on the various liner materials, such as water-vapor and alcohol-vapor transmission rates, chemical resistance, etc., that will enable the user to make an intelligent decision.

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ALUMINUM FOIL

III. Its performance with packaged products

By JUNIUS D. EDWARDS* and D. B. STROHM†

The real test of a package is its performance in service. Laboratory tests, however, under a variety of conditions are valuable in a preliminary appraisal of a particular package for handling a specific product. In the two previous articles of this series, the properties of aluminum foil and some details of package structures using aluminum foil were discussed. In this article, the last of the series, will be presented a variety of laboratory tests which show the value of aluminum foil in the packaging of typical products.

It should be pointed out that, for the most part, these tests have been conducted under severe conditions in order to test critically the protective powers of the various wrappers. The tests therefore may be considered accelerated tests and due allowance should be made for this fact in appraising the performance of wrappers under other conditions. However, the widespread demand for American products both at home and abroad is leading manufacturers to package their products so they will withstand extended storage periods under a wide variety of climatic conditions. The examples selected for purposes of illustration range from cigarettes and candy to steel bearings and silverware.

Cigarettes

The manufacturer of cigarettes wants his product to reach the user with the same freshness it possessed when packed. This requires that the cigarettes should not dry out in atmospheres of low humidity or pick up excessive moisture in humid environments.

The effects of using different kinds of wrappers and several methods of closure or sealing in the packing of cigarettes are shown by the data of Table I. Standard packages of 20 cigarettes were wrapped in various ways, using as the inner wrapper aluminum foil of several gauges attached to 35-lb. bond paper by multiple glue lines. The foil-wrapped cigarettes were enclosed with the customary paper-label envelope and given an outer wrap of cellophane. In one series of tests, the cigarettes were wrapped only in 35-lb. bond paper.

These packages were closed or sealed in four different ways, as described in the table. They were tested to determine their resistance to moisture penetration by storing in a warm, humid atmosphere at a temperature of 106 deg. F. and a relative humidity of 80%. At the end of four weeks, the increase in moisture content of the cigarettes was analytically determined by the toluene extraction method. The results are equally

significant, however, in showing the ability of the package to prevent loss of moisture in atmospheres of low humidity.

TABLE I-INCREASE IN MOISTURE CONTENT OF PACKAGED CIGARETTES DURING FOUR WEEKS' STORAGE AT 106° F. AND 80% RELATIVE HUMIDITY

| | Increase i | n moisture | content-% | | | |
|---|------------------|------------------|------------------|--|--|--|
| Wrapper material | Package No. 1 | Package No. 2 | Package No. 3 | | | |
| 0.00035-in. aluminum foil at- tached to 35# paper | 5.6 | 5.2 | 2.4 | | | |
| 0.0005-in. aluminum foil attached to 35# paper | 4.7 | 3.8 | 2.7 | | | |
| 0.0007-in. aluminum foil at- tached to 35# paper | 4.7 | 4.5 | 1.5 | | | |
| 0.001-in. aluminum foil at- tached to 35# paper | 4.1 | 4.6 | 0.3 | | | |
| 35# bond cigarette paper* (no foil with this wrapper) | 11.6 | 9.4 | 14.2 | | | |

Package No. 1 is normal package structure with aluminum foil-paper wrapper unsealed, paper-label envelope with tax stamp, moistureproof cellophane outer wrap partially sealed.

Package No. 2 is same as No. 1, with outside cellophane wrap completely

Package No. 2 is same as No. 1, with cellophane wrap removed and inner foil-sealed.

Package No. 3 is same as No. 1, with cellophane wrap removed and inner foil-paper (or paper*) wrap completely sealed

The initial moisture content of the cigarettes was approximately 13%. The values given in the table were obtained by subtracting the initial moisture content from the final moisture content. Average weight of 20 cigarettes (one package) at start of test was 22.4 gm.

The data in the last horizontal line, obtained with cigarettes wrapped in paper only, demonstrate quite strikingly the inferiority of a paper wrap in controlling moisture penetration. Even sealing of the joints effected little improvement of the paper wrap in resistance to moisture penetration. The outer cellophane wrap was most efficient as an accessory moisture barrier when it was completely sealed at all joints. Maximum resistance to moisture transfer was afforded when the aluminum foil wrap was completely sealed at all joints (Package No. 3). Experience has indicated that the popular cigarette wrapper with an aluminum-foil inner liner and a cellophane overwrap adequately meets many climatic conditions. Where, for any reason, closer control of moisture content is desired, this can be effected by completely sealing the inner wrap of foil, as shown by the results with Package No. 3.

Similar experiments with cigars have demonstrated the efficiency of aluminum foil wrappers in preserving their freshness and proper moisture content.

Chocolate

Chocolate and chocolate candy bars are products which should reach the consumer in the freshest possible condition. This means the appearance should be

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† Supervising Chemist, Packaging Laboratory, Aluminum Co. of America, Edgewater, N. J.

appetizing, the texture correct and the flavor free from staleness or rancidity. In Table II are data on storage tests of 1-lb. chocolate fudge nut bars wrapped in six different types of wrappers and stored for 25 days. The performance of these wrappers was judged in several ways: by the weight loss after 25 days' storage, by the flavor and by the appearance. The flavor and appearance ratings were appraised independently by three different inspectors.

Wrapping in plain waxed paper with a glassine outer wrap (No. 1) showed the largest weight loss after stor-This poor performance also coincided with the lowest flavor rating and appearance. The chocolate bar with the No. 1 wrapper was distinctly stale in taste and appeared hard and dry with surface crystallization along the edges. Mold was not observed on any of the chocolate bars. Wrapper No. 5, which was a laminated-foil wrapper, heat sealed, showed the best performance on all counts. However, the chocolate bars in each of the five wrappers which employed aluminum foil had a soft, creamy texture and were free from staleness. In the case of chocolate and other products, where volatile essential ingredients play such an important part in flavor and palatibility, even a very small weight loss may be significant of loss in quality.

TABLE II—WRAPPERS FOR CHOCOLATE NUT CANDY BARS

| | 10/11 | The D | | |
|----|---|--|------------------|---------------------------|
| | Description of wrapper | Weight loss in gm. after 25 days' storage at 85-90° F. | Flavor rating | Appear- ance rating |
| 1. | Waxed paper (0.002 in.) separate inner wrap; glassine paper (0.0015 in.) overwrap | 11.0 | 4 | 4 |
| 2. | Aluminum foil (0.00045 in.) laminated to glassine paper (0.0015 in.); glassine next | | | |
| 3. | to chocolate Aluminum foil (0.00045 in.) laminated to waxed glassine paper (0.0015 in.); waxed | 2.5 | 3 | 3 |
| 4. | glassine paper next to choco- late Waxed paper (0.0022 in.) separate inner wrap; over- | 2.5 | 2 | 3 |
| | wrap of aluminum foil (0.00045 in.) wax-laminated to glassine paper (0.0015 in.) | 2.5 | 2 | 3 |
| 5. | Aluminum foil (0.001 in.) coated with heat-sealing lacquer and laminated on opposite side to acetate sheeting; lacquer coating next to chocolate. This wrapper was heat sealed at seams | | | |
| | and ends | 0.5 | 1 | 1 |
| 6. | Aluminum foil (0.001 in.) | 1.5 | 2 | 2 |

In flavor and appearance, No. 1 is the highest and No. 4 the lowest rating.

It is also important to employ a wrapper which will prevent absorption of foreign odors by chocolates. A

severe laboratory test was carried out in which sweet milk-chocolate bars wrapped in various ways were stored in desiccators containing, in one case, cotton moistened with turpentine and, in the other, strong peppermint candy. At periodic intervals, bars were removed, unwrapped and tasted by two or more inspectors in order to detect the first trace of turpentine or peppermint vapor absorption. These tests, presented in Table III, showed quite definitely that while it was only a matter of hours before the paper wrappers permitted penetration and absorption of foreign odors, the aluminum foil wrappers kept the odor out for days.

TABLE III—EFFICIENCY OF WRAPPER IN PREVENT-ING FOREIGN ODOR ABSORPTION BY SWEET MILK-CHOCOLATE BARS

(Chocolate bars stored in glass desiccators, one containing cotton moistened with turpentine and the other containing peppermint candy)

| | | Time t | o taste |
|----|--|---|-------------------------|
| | Description of wrapper | Turpentine | Peppermint |
| 1. | Aluminum foil (0.0007 in.) coated with heat-sealing lac- quer; wrapper heat sealed along side seam and ends | 6 days | 7 days |
| 2. | Aluminum foil (0.0007 in.) coated with heat-sealing lacquer and laminated one side | | |
| | to moistureproof cellophane; coated surface heat sealed along side seam and ends | 20 days | 19 days |
| 3. | Plastic bleached greaseproof paper 22 ¹ / ₂ #; side seam and folds not sealed | 5 hrs. | $3^{1}/_{2}$ hrs. |
| 4. | | | , - |
| 5. | Control—no wrapper | 5 hrs. ¹ / ₂ hr. | $3^{1}/_{2}$ hrs. 1 hr. |

Hard candies and medicated lozenges

It is not an uncommon experience, particularly at the seashore, to purchase hard candies in attractive paper wrappers only to find, upon opening, that the candy is sticky and has lost its bright clear color and its palatability. Moisture penetrating the package has done most of the damage, but air has helped by oxidation and

1. MILK-BOTTLE CLOSURE formed from aluminum foil. Capis removed by turning and lifting.



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2. COMPARISON of carrots after 51 days' storage in a home refrigerator. Carrots at left were wrapped in aluminum foil; those illustrated at the right were stored without protection.

evaporation of volatile ingredients which were responsible for the original fine flavor. In extreme cases, the candy simply becomes unsalable.

Similarly, there are medicated lozenges made with a sugar base to carry certain medicinal substances such as menthol, oil of eucalyptus, oil of anise, camphor, thymol or chloroform. It is even more important that these lozenges be protected against contamination and the effects of excessive moisture, air and heat.

The tests reported in Table IV illustrate the advantages of aluminum foil wrappers in protecting medicated cough drops against extreme conditions during storage and distribution. These tests show that even in an atmosphere of 100 deg. F. and 90% relative humidity, the cough drops with the aluminum foil-glassine laminate wrapper showed no disintegration, even after 90 days' storage.

Dairy products

Aluminum foil at the present time is being satisfactorily used for wrapping or packaging such dairy products as butter, cream cheese, blue cheese and liederkranz cheese. However, not all types of cheese can be packed in contact with aluminum foil; some processed cheeses, for example, are so corrosive to bare foil that a special coated foil must be employed to withstand their action. There is extensive use of milk-bottle caps made from aluminum foil.

A laboratory storage test (Table V) illustrates some of the advantages of aluminum foil for the packaging of butter. One of the characteristics of fresh butter is its tendency, when exposed, to absorb odors from other foods which may be stored in the refrigerator. In these tests, an opened cantaloupe was employed as the source of the foreign odor. All of the foil wrappers kept the butter from acquiring any taste from the cantaloupe during the first 72 hrs.' storage. However, the unlaminated aluminum-foil wrappers (Nos. 4 and 5) protected the butter completely for one week. Again, in these tests, the dead-folding characteristics of aluminum foil, which permit it to cling closely to a product and limit the access of air, are shown to advantage.

In another test, carried out for a period of eight weeks, half-pound prints of the same butter were stored in a refrigerator with no contaminating atmosphere. All five of the foil wrappers protected the butter against any appreciable loss in weight and only in the case of Wrapper No. 1 was there any appreciable change in the taste. However, the butter wrapped in the standard parchment paper had a stale taste after eight weeks' storage and, in addition, the surface of the butter showed discoloration and salting out; the wrapper itself was wrinkled and shrunk. These results, as well as commercial experience, show that aluminum foil wrappers help protect butter against loss of weight, loss of flavor, oxidation and absorption of foreign tastes.

Milk-bottle closures

The use of aluminum foil for milk-bottle closures has grown to such a volume that it merits separate mention.

| TABLE | IV—PACKAGING | OF M | MEDICATED | LOZENGES |
|-------|--------------|------|-----------|----------|
| * | | | | |

| - | TABLE IV—FACKA | GING OF MEDICATED Period of store | age at 100° F. and 90% rela | tive humidity |
|----|--|--|--|---|
| | Description of package | 30 days | 60 days | 90 days |
| 1. | Cough drops (20) wrapped in waxed paper without sealing and placed in paperboard box with folded end flaps unsealed; box covered with overwrap of cellophane heat sealed along side seam and ends | White sticky mass. Lozenges partially dissolved | Total disintegration of lozenges into a wet, sticky paste. Test ended | |
| 2. | Cough drops (20) placed in bag made from aluminum foil (0.0005 in.) laminated to glassine paper with hot-melt adhesive; foil next to lozenges; foil bag heat sealed and placed in paperboard box, same as No. 1; no overwrap | Normal | Normal | White surface blush with slight de- gree of tackiness |

So T

TABLE V-WRAPPING BUTTER FOR STORAGE

(Fresh salt butter in half-pound prints; wrapped, but not sealed)

| | | contar atmo at 40- | ntaloupe ninated sphere -42° F. e after | Stored in sweet air almosphere at 40–42° F. Weight—gm. Taste | | | | |
|----|--|--------------------------|---|---|-------|---------|--|--|
| | Description of wrapper | 72 hrs. | 1 week | Start 8 weeks | | 8 weeks | | |
| 1. | Aluminum foil (0.00065 in.) laminated to plain parchment | | + | | | | | |
| | paper (0.002 in.) with wax adhesive; parchment next to butter | 0 | At ends | 228.5 | 228.5 | + | | |
| 2. | Aluminum foil (0.00065 in.) laminated to coated parchment | | + | | | | | |
| | paper with a wax adhesive; parchment next to butter | 0 | At ends | 228.0 | 228.0 | 0 | | |
| 3. | Aluminum foil (0.00055 in.) laminated to acetate sheet on one | | | | | | | |
| | side and lacquer coated on opposite side; lacquer coat next to | | + | | | | | |
| | butter | 0 | At ends | 228.0 | 227.5 | 0 | | |
| 4. | Aluminum foil (0.0007 in.) | 0 | 0 | 228.0 | 228.0 | 0 | | |
| 5. | Aluminum foil (0.0007) lacquer coated on one side; lacquer | | | | | | | |
| | coat next to butter | 0 | 0 | 228.0 | 228.0 | 0 | | |
| 6. | Standard parchment paper butter wrapper | +++ | +++ | 228.5 | 222.0 | + | | |
| | | | | | | Stale | | |

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Code:

0 No foreign taste perceptible; butter ok.

+ Slight foreign taste perceptible.

+ + Very strong foreign taste.

One type of aluminum-foil closure consists of 0.0035-in. annealed foil which is formed to a hood. This hood extends over the bottle-pouring surface and in capping is tightly molded to a locking ring in the glass finish. Usually the closure is removed by a "turn and lift" motion, whereby the hood flange is spread apart by lugs in the bottle finish. A photograph of a commercial closure of this type is shown in Fig. 1.

This bottle closure admirably illustrates the remarkable ability of aluminum to be molded to an irregular surface. Without the use of an adhesive, a properly applied closure will not leak milk even at 5 lbs. per sq. in. pressure. This is an important advantage, since milk is bottled cold and unsightly seepage might otherwise develop from the pressure created when the bottle warms to room temperature. Moreover, alternate heating and cooling might suck impurity into a closure that is not proof against pressure.

Annealed aluminum foil not only looks hygienic, but it is bacteriologically clean. Sanborn and Breed, New York State Agriculture Experiment Station (1940), found that 82% of the analyses of 36-sq.-cm. areas taken at 25-ft. intervals from the start of a roll showed less than four colonies, while for comparison the standards for paperboard to be used in milk-bottle closures set a limit of 500 colonies per gm. of disintegrated stock. The foil is non-reactive to milk and neither alters the flavor and taste nor diminishes the valuable vitamin content of the milk. The hood leaves no residue on the bottle and a hood accidentally carried into the bottlewashing machine is very quickly and also harmlessly dissolved.

The metal foil has good ability to resist puncture. Tests have shown that static loads of 11.4 lbs. for a 1/8-in. radius punch and 7.0 lbs. for a 1/16-in. radius punch, applied to the center of the closure were required to pierce the metal.

Aluminum milk-bottle foil is easily embossed with the name of the dairy and a descriptive sales message. The foil is also flexible enough so that the closure can be turned easily for removal. On the other hand, the foil is stiff enough so that it forms a convenient reclosure for a partially emptied bottle. Also, the foil carries distinct markings after hood removal which discourage adulteration of the bottle contents.

The aluminum foil is so cheap and easily applied that

3. CORN after 3 weeks' storage in refrigerator. Two ears at left were wrapped in foil; one at right had only protection of natural husk.



the entire bottle-pouring surface is covered at a cost little greater than formerly was necessary for a simple paper plug.

Cap liners

The fact that aluminum foil, bare or coated, is impervious to both liquids and gases makes it an ideal liner for bottle caps. The metal is also sufficiently soft that a good seal can be secured, particularly if a cushion backing such as cork or plastic is employed. It is nontoxic and ideally adapted for the holding of many types of foods, both solid and liquid. An outstanding application is the spot liner in beer caps.

Fresh vegetables

The packaging of fresh vegatables to prolong their edible life presents some problems not met with in the preceding examples. All require the maintenance of their moisture content to preserve "freshness" and palatability. Green vegetables, in addition, require a certain amount of oxygen for respiration if they are not to succumb to wilt.

Carrots are one of the easier vegetables to keep. The following test, however, illustrates quite graphically the benefits of protective packing. Carrots for this test were taken fresh from the garden, tops removed and washed. Some of the carrots were packed loosely in a rectangular, heat-sealed, aluminum-foil (0.001-in.) bag. This sealed package was placed in a household refrigerator and beside it were placed four of the same batch of carrots of comparable size, but without a wrapper of any kind. The photograph of Fig. 2 shows these carrots after 51 days' storage at a temperature of 40 to 45 deg. F. The carrots packed in the heat-sealed, aluminum-foil bag for 51 days were without trace of mold, wilt or rot. These carrots were peeled and cooked; five people who ate some of the carrots agreed that they tasted as good as fresh carrots.

More difficult to preserve are green vegetables such as corn on the cob and lettuce. The U.S. Department of Agriculture (Circular 278, Nov., 1941) states that green corn "as it usually arrives on the market should not be expected to keep in marketable condition in cold storage for more than four to eight days." Fig. 3 shows two ears of husked fresh green corn which were wrapped in aluminum foil (0.0007 in.) and stored in a refrigerator at 39 to 40 deg. F. and 45% relative humidity for three weeks. At the end of this period there was no mold, discoloration or wilt detectable. The corn after cooking was eaten by three inspectors who judged the corn to be tender and sweet in taste. Beside these two ears in the photograph is a third ear stored in the original husk without a foil wrapper. At the end of two weeks this corn had deteriorated appreciably, was tough and inferior in taste. Additional tests showed that if husked green corn was fumigated for 20 minutes in an atmosphere containing 0.3% sulfur dioxide and then wrapped in aluminum foil, it could be stored for five weeks and still remain in good edible condition.

The frozen-food industry has recognized the protec-

tive qualities of aluminum foil for fresh green corn on the cob; today this frozen food is on the retail market wrapped in aluminum foil to protect and seal in its freshness.

Frozen foods

The packaging of frozen foods places special requirements on the wrapper. The very low humidity maintained in the frozen-food locker necessitates a relatively impervious wrapper if desiccation of the product and freezer burn is to be prevented. The protective burden on the wrapper is even greater because storage periods may be as long as 12 to 18 months. Aluminumfoil wrappers and foil-lined cartons are being used effectively in the protection of frozen fruits and vegetables. However, the storage of frozen meats and fowl presents problems which are worth special mention. The use of aluminum foil for this application has been studied by a number of laboratories. For example, W. V. Cruess of the Food Technology Division, University of California, writes:

"Our results agree with those recently reported by J. G. Woodroof, Georgia Experiment Station (Food Freezing, March, 1947), who compared aluminum foil, cellophane and locker paper for ground beef and chickens stored for one year at 0 deg. F. He found that much desiccation, freezer burn and staling occurred in the locker paper; that cellophane permitted considerable desiccation, freezer burn and some staling of odor and flavor, whereas the meats and chickens wrapped in aluminum foil were still in excellent condition with practically no desiccation, freezer burn and staling. The total relative quality scores were for the basis of aluminum-wrapped chicken as 100, for cellophane 75 and for locker paper 50. He stresses the need for so wrapping that all of the meat surface is in contact with the foil. We strongly approve this recommendation, since we observed that with chops poorly wrapped in the foil so that air pockets existed, freezer burn and staling occurred. The various wraps were compared with hamburger, ground lamb, beef steak, beef roast and pork in our tests."

Figs. 4 and 5 show two rolled rib roasts which were held in a freezer at approximately 0 deg. F. for six months. The roast in Fig. 4 was wrapped in aluminum foil and the one in Fig. 5. in waxed-parchment freezer paper. The roast wrapped in aluminum foil had lost only 1% in weight and was in good condition with fresh, natural appearance and taste, whereas the one wrapped in parchment paper had lost 10% in weight and suffered serious freezer burn and depreciation in quality.

Packaging of polished steel

There are many fine articles made of steel which require special wrapping to make sure that the customer will receive them free from rust; these may range from surgical knives to polished steel bearings. Generally such articles are treated with a rust-inhibiting oil prior to packing. This oil treatment, however, is not proof against rusting, as the following tests will show. The

ROLLED RIB ROASTS held in freezer at approximately 0 deg. F. for 6 months. 4. Roast (left) wrapped in aluminum foil; note dark coloring indicating freshness of meat. 5. Roast wrapped in waxed parchment freezer paper; the white, porous-looking surface indicates freezer burn.

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wrapper employed should be proof against penetration by the oil. Aluminum-foil wrappers can be very effectively used, both to prevent rusting and to prevent oil penetration.

The results of a series of tests on wrappers for polished carbon steel bearing races are presented in Table VI. The two wrappers (Nos. 1 and 2) employing aluminum foil were very effective in protecting the oiled bearings during storage in a hot, humid atmosphere. Even wrapper No. 1, which was not heat sealed, did a good job on the oiled bearings; the same wrapper around a dry bearing (No. 7) was not completely protective.

TABLE VI—WRAPPERS FOR POLISHED STEEL (Polished carbon steel bearing races, dipped in antirusting oil, excess oil drained and bearings wrapped. Packages stored at 106° F. and 90-92% relative humidity)

| | | 0 | ree of ing after | |
|----|--|------------------------|---------------------|--|
| | Description of wrapper | Storage 180 hrs. | | |
| 1. | Aluminum foil (0.00035 in.) laminated to 25# red paper with wax; foil next to bearing | 0 | 0 | |
| 2. | Aluminum foil (0.00035 in.) laminated to 25# red paper with wax; foil next to bearing; steel bearings wrapped in foil laminate and heat sealed in bag made from aluminum foil (0.001 in.) with lacquer | | | |
| | coating | 0 | 0 | |
| 3. | Red paper 25# | 1 | 7 | |
| 4. | White glassine paper | 10 | 10 + | |
| 5. | Waxed paper 40# | 2 | 9 | |
| 6. | Kraft paper waxed | 2 | 7 | |
| 7. | Aluminum foil (0.00035 in.) laminated to 25# red paper; same as No. 1, except bearings were dry (not oiled); foil next to | | | |
| | bearing | 1 | 2 | |

The degree of rusting after storage is indicated by code numbers from 0 to 10. Zero indicates no rusting, while the degree increases from 1 to 10; No. 5 indicates appreciable rusting, while No. 10 indicates a surface which is about 90% rusted.

It would appear that wrapping paper will take up moisture and stimulate the corrosion of steel with which it is in contact. However, the foil laminated to paper greatly reduces the rate of moisture pick-up and prolongs the protective life of the wrapper.

Vulcanizing patches

One type of hot vulcanizing patch comprises a shallow steel cup filled with a combustible compound. In the center of this flammable pad is a kind of match head which, when scratched, ignites the combustible pad. To the back of this steel cup is attached a rubber tube hot patch. Obviously the striking head and the combustible pad have to be protected against moisture and kept in good condition, ready to function when needed.

To test the efficiency of aluminum-foil wrappers, vulcanizing patches were heat sealed in envelopes $3^{1/2}$ in. square, made by heat sealing the four sides of lacquer-coated aluminum foil 0.001 in. in thickness. For comparison, patches were also individually heat sealed in cellophane wrappers and in rubber-hydrochloride-film wrappers of the same size. All of these patches were stored in a cabinet with controlled atmosphere maintained at 106 deg. F. and 80% relative humidity.

Patches were removed and tested at regular intervals to determine their performance. The patches sealed in the cellophane wrapper would not ignite after seven days of storage and the steel cup was found to be heavily rusted and corroded. The patches sealed in rubber-hydrochloride wrappers would not ignite after 28 days' storage; the steel cup was also heavily rusted. The patches heat sealed in the aluminum-foil envelopes ignited readily after a storage period of six months at 106 deg. F. and 80% relative humidity.

The very satisfactory performance of the aluminumfoil envelope was to be expected from previous measurements of its resistance to water-vapor transfer and the satisfactory commercial experience with its use for packaging hygroscopic salts and compounds such as dehydrated effervescing medicinal compounds.

Wrapping of sterling silver

The beautiful finish on sterling silver when it leaves the maker's factory is a difficult finish to preserve untarnished. Mere traces of (Continued on page 268)

TAPPI TEST METHODS

evelopment of new TAPPI test methods for packaging materials was discussed at a meeting of the subcommittee assigned to this subject during the general meeting of the Technical Assn. of the Pulp and Paper Industry in New York, Feb. 23 to 26. The subcommittee discussed the test results submitted during the past year and made an approach toward new test methods for several important qualities.

Much of the discussion concerned the transmission of water vapor through packaging materials at 0 deg. F. Important as this temperature is to users of packages for frozen foods, there is still no generally accepted test procedure for measuring water-vapor permeability under these conditions. Considerable data were presented as a result of tests made by various methods on a series of selected and characteristic samples sent out by the committee chairman, George Sears of the Institute of Paper Chemistry. Unfortunately, the quality and quantity of these data were such that no conclusions could be presented or any method approved for further study. It was suggested that in the coming year new samples be submitted to a larger number of laboratories and that a greater mass of data be made available for the next meeting of the committee.

Another subject was the test procedure for the proximate evaluation of the odor permeability of packaging materials. The group which reported on the status of the method were reluctant to favor the drawing up of a suggested standard for submission to TAPPI because of criticism that the method gave too much latitude in the choice of the odor and also because the results were relative. However, many of the committee members vigorously reaffirmed the need of a test procedure for this property of materials and pointed out that one of the virtues of the method was that it allowed the use of any product or odor source and provided a comparison between packaging materials in an important field where no means of differentiation now exists.

The test method discussed consists of cutting in half (half the vertical height by a plane parallel to the base) a glass jar with a large, quick-opening closure; the edge of the cut to be ground and polished. The odorbearing product is placed in the bottom half, the flat sample of packaging material placed on the cut section, then the top half (with closure in place) reset in its original position. The test jars are made up in duplicate for each packaging material and the group includes a control or acceptable material for comparison. The jars are stored at constant temperature and examined (organileptically) for the first evidence of odor in the top chamber, the time for this appearance to be the index of odor permeability, i.e., the longer the time of odor appearance, the lower the rate of trans-

Packaging subcommittee discusses new standards for water-vapor permeability at zero, odor permeability, mechanical porosity and other factors

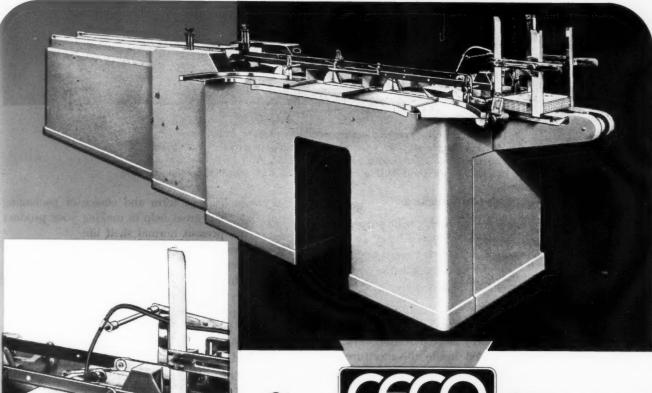
mission of the odor or the more impermeable the material to the particular odor. Obviously, the usual precautions of examination by several persons, avoidance of fatigue and the proper technique of such examinations will be carefully outlined by the test method. The committee will reconsider this method and perhaps offer it as a suggested standard at its next meeting.

Also discussed was the subject of a standard procedure for the operation of cyclically controlled temperature and humidity atmospheres in the testing of packages for moisture gain or loss. Most package testing is done at constantly maintained levels of temperature and humidity, but there was some opinion that a proper cycling of the temperature and humidity would produce results more in keeping with actual atmospheric conditions. Also, packages for military uses can be given more rigorous testing if wide variations of conditions are used. However, the length and levels of the various phases of the cycle must be carefully established to obtain the required acceleration of the test without excessively complicating the equipment or its operation. A task group was appointed to report on a suggested procedure at the next meeting.

Some discussion was had on the matter of testing the strength of heat seals. The important considerations are the manner in which the test seal is stressed, the rate of pull and the preparation of the sample. It is expected that the committee will be able to come to a decision on this method for the next meeting.

During the past year, the committee submitted for approval as a tentative standard a method for determing the melting points of petroleum. This method parallels that of the American Society for Testing Materials and should be a worthwhile addition to the TAPPI tests.

Another method being prepared for committee action is one developed by H. H. Hartwig of Marathon Corp. for determining the mechanical porosity of materials and packages. This is a very ingenious method which makes it possible to detect the mechanical degradation of materials as they pass through the operations of creasing, forming, sealing and, (Continued on page 282)



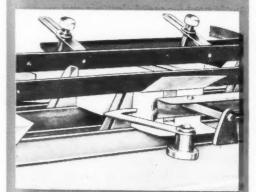
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Closeup view showing carton automatically fed from stack and set up to receive approaching product on synchronized feeding conveyor.



Inner flaps on apposite end of certon are closed automatically before product is inserted. Certon is then automatically closed by

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Closed cartons are automatically conveyed to

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Questions and Answers

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Preventing product from caking

QUESTION: Our problem is how to package our product without having it cake very quickly. Our product is a mixture of salt and flavors which we put into a small packet by hand. The four sides of the packet are sealed with paste. The material is a one-side-waxed paper.

ANSWER: It would appear that your product is being caked very quickly by the moisture of the paste used to seal the packet. All pastes carry large percentages of water and this water is released inside the moisture barrier which in this case is the waxed side of your paper.

You can avoid this trouble and make your packets faster if you use one of the many heat-sealing, moisture-proof materials on the market. By this process, the only moisture which can cake your product will have to go through the packet walls and this can be controlled by your choice of materials.

Odor in packages of ready-to-eat food

QUESTION: We are manufacturers of a pre-cooked and ready-to-eat food product which we package in 4-oz. units in a folding carton with a waxed glassine or cellophane liner. Our packaging machine makes a heat-sealed liner and we use the two materials interchangeably. The product contains sugar, cereals, some fat and flavors and is given several pre-treatments before it is finally shaped and baked. We are having complaints of unpleasant odors being present when the package is opened. We picked up packages from various stores and found the product crisp, but carrying off odors of varying amounts. Can you suggest a change in our packaging that would aid us in solving this complaint?

ANSWER: The complaint about off odors and flavors is due to varying degrees of rancidity which have developed in your packaged product. The product is a complex mixture containing fat which has been heated to temperatures high enough to make it unstable and liable to oxidation in room storage.

You should do everything possible to make your product more stable by the proper choice of ingredients, processing conditions and equipment. For example, the use of copper kettles may accelerate the development of rancidity. However, these factors should be checked by an experienced food technologist.

The proper package form and choice of packaging materials can be of great help in making your product usable over its present normal shelf life.

Your present packaging material is providing sufficient moisture proofness, but both glassine and cellophane have the inherent property of not transmitting organic vapors and odors. The result is that as portions of your product oxidize, the odors accumulate in the liner and produce an unpleasant result when the package is opened. After opening, these odors are soon dissipated and apparently the oxidation has not gone far enough to affect the taste of the product.

The answer to this problem is to use heat-sealing, moistureproof materials which will allow these odors to escape as they are formed. In your case, the use of waxed sulphite paper with at least 10 lbs. of wax per ream as a surface coating will give you adequate moisture protection and keep your product from developing unpleasant odors.

Packaging of new chemical product

QUESTION: Can you tell us how to find the proper packing means for one of our new products? The product is a mixture of chemicals used for metal cleaning and we want to market it in 4-oz. and 8-oz. sizes. The product is not used at one time and the packing means must keep it from caking.

ANSWER: You are concerned with "packaging" means, not "packing" for your new product.

The term "packing" is generally accepted as referring to the shipping container, such as a corrugated case, wood box, etc., in which a packaged product is placed for shipment. "Packaging" implies the use of a container for the product in the form of a sales unit as purchased by the consumer. Folding cartons, fibre cans, bags, metal cans, glass jars, etc., are packages.

If your product is not too corrosive to fibre or metal, you can obtain a fibre-bodied can with metal ends of a suitable construction which should keep your product from caking. A friction plug would provide a filling means and a reclosure feature.

A quick laboratory test would determine if corrosion is a problem and which of the samples submitted are most suitable. It may be that your product is highly corrosive to metal or fibre and if so, you should use a glass container with a glass closure and rubber gasket.

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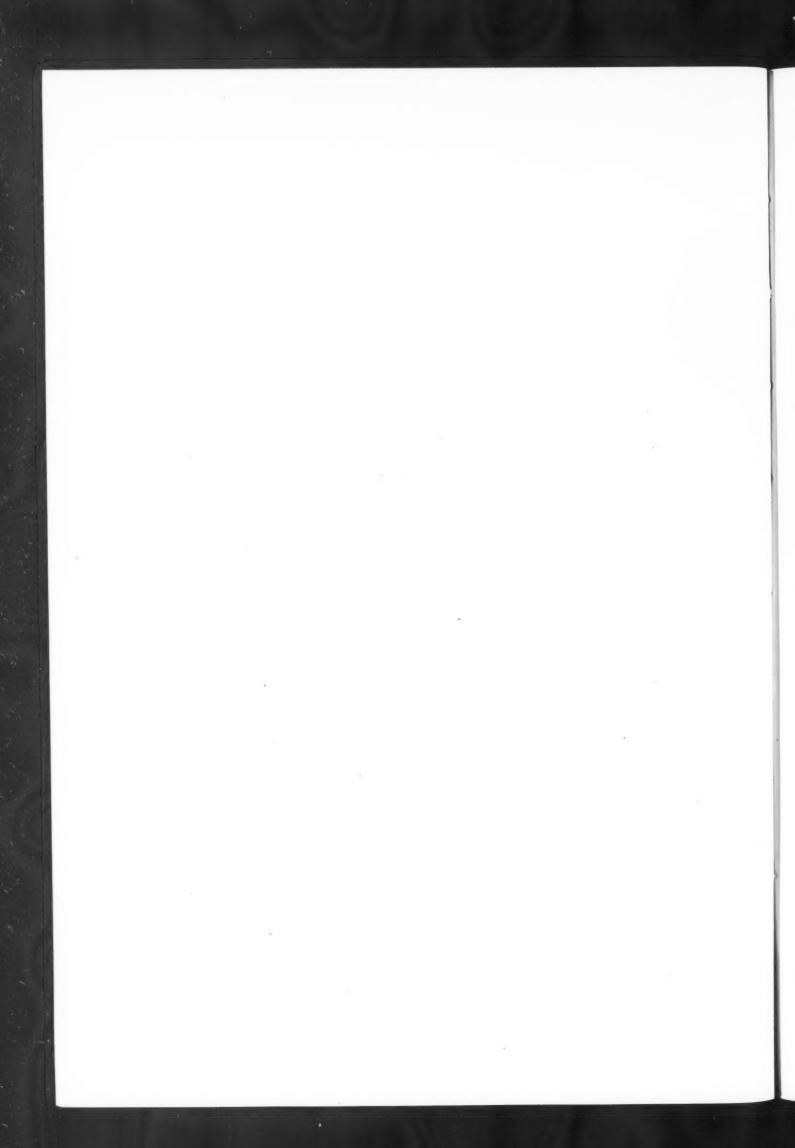
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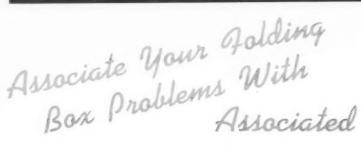
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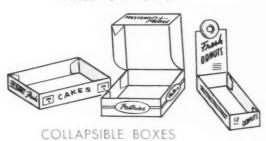
WINDOW CARTONS

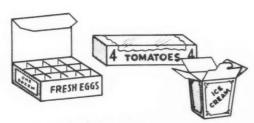


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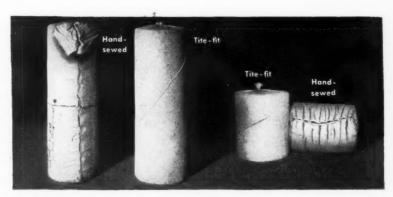
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IMPROVE the appearance of your rolls.

packages that are easy to handle, because there's a handy ear on each end.

SAVE TIME as TITE-FIT TUBING is easily and quickly removed. Just untwist wire tie at one end and

ELIMINATE chance of cutting into contents and damaging goods, as no cutting of sewing thread or goods is necessary.



This versatile tubing fits almost any shape and a wide range of package sizes. One roll may cover many different diameters and lengths neatly, without waste because TITE-FIT TUBING has stretch in both directions.



Pull tube well down over object, leaving an overage to cover bottom.



Turn package on side and fasten tube at bottom with a wire tie.



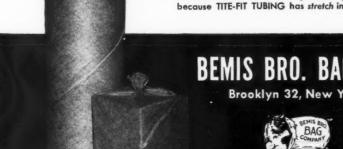
Turn package upright and use both hands to take up slack.



Fasten top with a wire tie close to object to assure tight fit



5. Cut off the Tite-Fit Tubing about 3 inches above the wire tie.



BEMIS BRO. BAG CO.



., Port Colborne, Ontario, are licensed manufacturers TITE-FIT TUBING in Canada.

MAIL COUPON NOW

Bemis Bro. Bag Co.

5130 Second Ave., Brooklyn, N. Y.

☐ Send descriptive folder on TITE-FIT TUBING

Send sample. Our packages are approximately inches in circumference. (Please specify)

ING

"ARABOL QUALITY...PERFORMANCE and SERVICE are EXCELLENT"

- Bercut-Richards Packing Company



Bercut-Richards Packing Company, noted California canner of quality foods, has found Arabol Adhesives tops in quality, performance and service.

The reason lies in the fact that every Arabol Adhesive is built for maximum efficiency in a specific application. The complete line of canners' pick-ups, lap-pastes, case glues, and bottle-

labeling glues guarantees an efficient labeling operation.

Out of more than 60 years service to the leaders in a hundred industries, there are now some 10,000 adhesives formulas on file in the three Arabol Laboratories. See the Arabol Representative when he calls;

he knows adhesives.

THE ARABOL MANUFACTURING CO.

Executive Offices: 110 East 42nd St., New York 17, N. Y. CHICAGO—54th Ave. & 18th St. • SAN FRANCISCO—1950 16th St. ST. LOUIS—2500 Texas Avenue

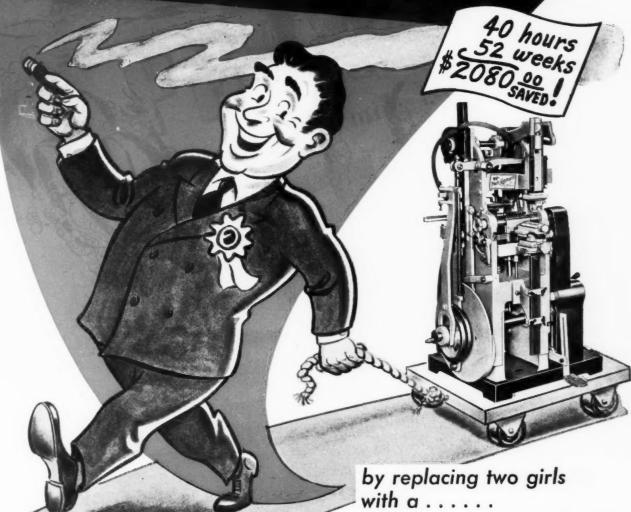
Branches in Principal Cities Factories in Brooklyn, Cicero, San Francisco, St. Louis

Adhesives?... ARABOL!

in the making of

He saved \$100 an Hour on Labeling alone!

(2000 hours a year)



PONY LABELRITE*

When your labeling line requires two girls to "straighten" labels, or wipe off excess adhesive that seeps from beneath the labels, YOU CAN SAVE \$2,000 A YEAR!! Merely by replacing your obsolete labeling machine, and installing a PONY LABELRITE . . . thanks to Straightline VACUUM label lift, and TWIN-ROLLER gluing method!

Ask for details . . . modernize for extra savings!



NEW JERSEY MACHINE

Corporation

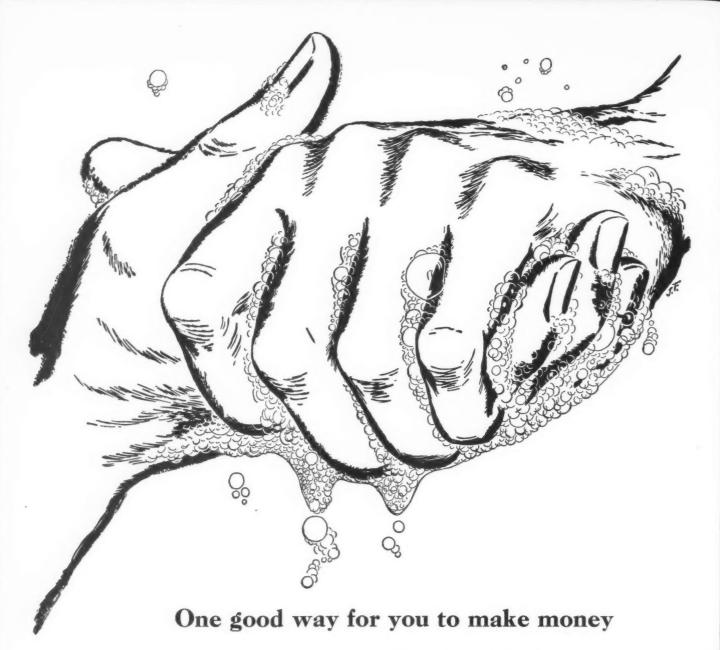
1510 WILLOW AVE. . HOBOKEN, N. J.

Chicago Office: 325 W. Huron Street Cincinnati Office: 1701 Carew Tower Los Angeles Office: 2500 W. 6th St.

* Reg. U. S. Pat. Off.



Air-Wick bottles labeled front and back for Seeman Brothers at the rate of 108 labels per minute.





At Canco, one of our hands often washes the other to a customer's profit. For instance . . .

By 1922, vegetable shortening needed a new metal container -airtight and tamperproof—to replace the old one.

It so happened that Canco had just perfected a container for another product which was airtight, tamperproof, and included a key-opening device.

Building on this experience, Canco soon had the container needed to solve the shortening problem.

This story illustrates again one well-known advantage of doing business with Canco: Out of our vast experience in solving container problems, we draw help in solving other container problems quicker and better.

For 47 years, Canco customers have had this type of know-how helping them make money. Possibly, Canco can help you make money this way, too.



AMERICAN CAN COMPANY CANCO New York . Chicago . San Francisco

Visit our booth #403 at the Packaging Exposition, Cleveland, Ohio, April 26-30th.

DAILY on millions of packages.

molten film forming compounds for

SEALING

ON LABELS ON FABRICS ON CARTONS ON BAG TABS ON GLASSINE ON END SEALS ON PARCHMENT ON CELLOPHANE ON METAL FOILS ON MOUNTING TISSUE ON FRANKFURTER BANDS ON WET STRENGTH PAPER ON BAG SEALING STRIPS

1 Courtesy Westport Bakeries - Kansas City 2 Courtesy Cracker-Union—San Francisco 3 Courtesy Continental Coffee Co., Inc. - Chicago

PYROXYLIN PRODUCTS, INC.

PAOLI, PENNA.

CHICAGO 32

WICHITA, KAN.

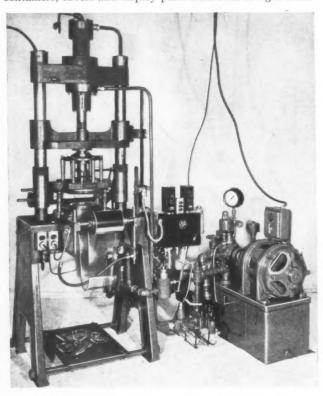
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Equipment and Materials

DRAW FORMS THERMOPLASTIC SHEETING

Hulbert Engineering Corp., Watertown, Wis., now has available a high speed, automatic forming press for draw forming of containers, covers and display parts from rolls of rigid trans-



parent thermoplastic sheeting. The Model PA-104 illustrated is a full hydraulic type with a 10-in. stroke and five tons maximum effort. Its press structure accommodates automatic dies for round and oval formings up to 8 in. in diameter. Finished product is dropped through the press bed and waste "flash" is ejected at the back of the press by electrically controlled air, adjustable as to time and pressure. The die design holds waste to a minimum by cutting a blank from the web of material and then drawing and trimming in one continuous stroke. Controls for single and automatic cycling, variable ram speeds, adjustment for length of stroke and total effort, change of speed position, and dwells are provided in the press and power unit.

Cover formings as large as 12 in, in diameter are drawn in dies fed manually with pre-cut blanks. Embossing, die cutting and other operations may also be performed by mounting the necessary structure on the large bed and moving platen which is guided by long bearings on the two supporting columns.

Output speeds range from 1,200 to 3,600 pieces per hr., depending on the depth and size of forming.

The company has recently completed development on an automatic cylinder-forming and cementing unit and a high speed drawing and beading machine for the production of round containers up to 4 in. in diameter which are beaded at the same time they are drawn.

NEW ROTARY HEAT SEALER

Pack-Rite Machines, Milwaukee, Wis., announces the development of a new rotary heat-sealing machine, the Speedsealer, which they will exhibit at the Packaging Exposition and Conference in Cleveland. This machine, it is claimed, incorporates many improvements and new features. Among them is the safety-locking, slide-type adjustment said to insure uniform sealing pressure over the full surface of the crimping rolls at whatever pressure is being used. A spring release is said to eliminate all possibility of gear damage should foreign particles come between the crimping surfaces. The improved heater mounting and thermostat provide accurate temperature control and longer heater life, it is claimed. Other features include wear-resistant aluminum bronze sealing rolls and rugged one-piece cast aluminum frame. All bearings are of the graphited-bronze type and both roll shafts are driven by a hardened-steel roller chain.

NEW SOILPROOF LAMINATED PAPER

The Dobeckmun Co., Cleveland, Ohio, is now producing a new box and label paper laminated with cellulose acetate which is said to provide vivid soilproof colors having unusual lasting brilliance and eye appeal. Designated as "Doplex Brilliant," this paper is available in nine colors and may be used for set-up and folding boxes, labels, wraps, displays, etc. Moisture, grit, dust and grease, it is said, fail to dim the brilliance of this paper and a dry or moist cloth is all that is required to clean its surface. It has unusually good printability, the company claims. The material is supplied in rolls 26 in. wide equal to two reams of 20 by 26 in. and also in sheets 26 in. wide by lengths up to 40 in.

RE-USE GIFT BOX

A development which should prove interesting to manufacturers of products merchandised in re-use or gift boxes is illustrated in the "library box" made by The S. K. Smith Co., Chicago. The process by which steel-die intaglio engraving

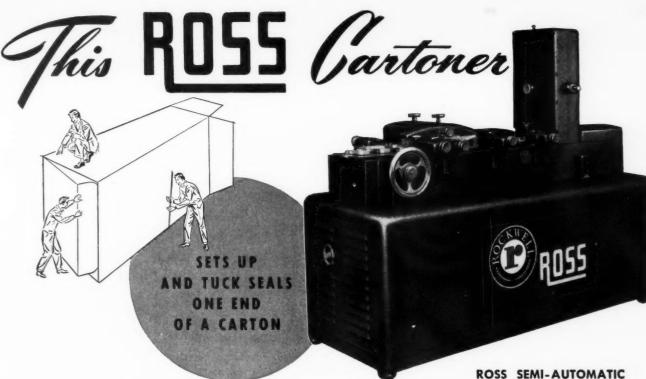


and brass-die embossing are combined and applied to pyroxylin-coated or foil box wraps results in a brilliant, heavy application of engraving inks in all colors. A third-dimensional embossing effect is achieved through

the use of latex-based, pyroxylin-coated fibres. The surface has a lustre comparable to that of patent leather, yet it retains much more depth of color. The box wrap shown is finished in a rich, brown, antique, simulated leather, with an embossed design that has definite eye appeal for luxury items.

NEW BAG FOR FROZEN FOODS

Thomas M. Royal & Co., Philadelphia, Pa., announces its "Flav-O-Tainer" bag is now available with a polyethylene liner and is recommended as a locker bag for deep-freeze units,



PAYS FOR ITSELF

out of savings

By keeping everlastingly busy . . . by cutting expensive downtime during carton size changeovers . . by saving manpower through eliminating manual setting up of cartons, ROSS CARTONING MACHINES PAY FOR THEMSELVES!

Seldom will you find any kind of a machine that gives a greater return on your investment. And you can't buy a better built machine. Parts are standardized; made to close tolerances. Vital moving units are self oiled. Master Speedranger control provides maximum flexibility. Mail the coupon today for complete information.

SEND FOR FREE LITERATURE

CARTONING MACHINE

Will set up and tuck seal a wide range of various size cartons ready for hand loading or hand filling. Operating range is in excess of 120 cartons per minute. Fully automatic Ross machines that first load and then seal both ends of the carton are also available.



YOU DIAL IT LIKE A RADIO!

A change from one size carton to another can be made in a few minutes time without substituting interchangeable parts. It's done by simply resetting the position of dial controlled compounds that are permanently mounted on the machine bed.

A. H. ROSS COMPANY, Inc.

PACKAGING MACHINERY

Subsidiary of Rockwell Manufacturing Company

Box 998, Dayton 1, Ohio

SEE US IN BOOTH NO. 608 AT THE 17th A. M. A. PACKAGING EXPOSITION A. H. ROSS COMPANY, INC. Box 998, Dayton 1, Ohio

Gentlemen:

Please send me, without obligation, your complete engineering and performance data on Ross 🗌 semi-automatic or Ross 🗌 automatic machines.

COMPANY

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Equipment and Materials

(Continued)

as well as for other frozen food applications. It is reported to offer protection against moisture losses and freezer burn and to remain flexible and tough at all sharp-freezing and holding temperatures. The bag features a cut-out in the gusset to permit face-to-face sealing on any conventional sealing equipment or in the home with a hot iron. The "Flav-O-Tainer" bag with Pliofilm and other plastic films, as liners will continue to be available.

CELLULOSE TAPE DISPENSER

The Texcel predetermined length dispenser offered by Industrial Tape Corp., New Brunswick, N. J., affords users of cellulose pressure-sensitive tape a quick, accurate and economical



means of sealing where a definite length of tape is required. The machine can be adjusted to dispense predetermined lengths of from 1 to 4 in. in multiples of $^{1}/_{2}$ in. merely by setting a dial. It accommodates tape from $^{1}/_{4}$ to 1 in. in width.

This device saves tape because only the amount required

is withdrawn and it saves time because the operator can automatically withdraw the predetermined length of tape. The heavy frame and sponge-rubber pads assure stability.

ALCLAD BEER BARREL

Aluminum Co. of America, Pittsburgh, is producing a new beer barrel made from Alclad sheet which is said to assure a high-purity aluminum liner with increased protection to contents. The two sections of the barrel, plus the forged-aluminum bung plate are joined by means of the argon arc-welding process, for smoother and stronger joints. Two years of actual brewery tests under the most adverse conditions have been so successful, the manufacturers report, that they are now changing their entire beer-barrel production to Alclad sheet, in which the coating is bonded on either one or both sides as an integral part of the alloy base.

PAPER SHREDDER

An all-purpose shredding machine which turns out packing material in the form of long, dustless strips of paper $^{1}/_{32}$ in.



wide, or any desired multiple thereof, is being offered by The Shredmaster Corp., Brooklyn. The machine will operate from rolls or hand feed, automatically shredding such materials as newspapers, waxed and tissue paper, cellophane, labels, premium packages, office records, etc. It is said to operate without litter

or noise and the various types of excelsior produced can, of course, be used for packing, display purposes, etc. Other uses for the machine, the makers report, are the shredding of foil, rubber, leather, textiles and fruit peels.

POLYVINYL ALCOHOL FILM

The Reynolds Metals Co., Plastic Div., New York, announces another polyvinyl-alcohol film for industrial use, known as Reynolon 4,000 series. This functional plastic is a clear, transparent film that is water soluble, yet is said to be highly resistant to fats, oils and greases and unaffected by most organic solvents. The makers report it is odorless, tasteless and non-toxic and may, therefore, be used for bags for such products as dyestuffs, oil, flavor concentrates, etc., where the bags can be dissolved in use; low-pressure-molding bags, gaskets, etc. It is available in 0.002-, 0.003- and 0.004-in. gauges. The company simultaneously announced a price reduction of 6 cents per lb. for its Reynolon 2,000 series.

MORE SIZES OF PLASTIC CLOSURE

Owens-Illinois Glass Co., Toledo, Ohio, announces availability of additional sizes of their Empress molded-plastic closures. This is a stock-design cap for use primarily on cosmetic and toiletry bottles. They are obtainable in a wide range of colors in the regular style, as well as with molded well or peg for use with brush applicators.

NEW COATING FOR PAPER

"Pliphane," a new coating designed to increase the durability and beauty of paper applications has been developed by the Watson-Standard Co., Pittsburgh, Pa. It is a high gloss, decorative and functional coating said to provide excellent adhesion to all kinds of inks and is adaptable to any conventional method of paper coating. The manufacturer claims it has a high degree of resistance to chemicals, flame and alcohol, thus giving longer and more effective life to any paper product subject to repeated wear or deteriorating influences. Suggested uses are for labels for cosmetic containers and beer or whiskey labels.

NEW PROCESS FOR ANIMAL GLUE

As a result of a new manufacturing process, Swift & Co., Chicago, is now in large-volume production of animal glue in semi-solid form. The resulting product is known as Swift's Amber Semisol, a bone glue that is shipped from the factory in semi-solid form. It is a jelly at room temperature, but when warmed to usual operating temperatures it becomes fluid again. No solution is required as with dry-ground glue. It is ready to use when brought to the temperature and dilution required by the job.

WIRE STITCHER

A. F. Fischer & Sons, New York, are offering a wire stitcher having carboloy cutters, a specially designed spool bracket which is said to eliminate kinking of wire and a retractable anvil. It is set to take a $\frac{3}{8}$ -in. crown, $\frac{3}{16}$ -in. capacity stitch, using the following wire sizes: round, No. 25; flat, 20 by 25, 21 by 25 and No. 1 Hybar.

STATIC ELIMINATOR

A newly developed static eliminator produced by The Simco Co., Philadelphia, is adaptable to certain applications in the packaging and printing fields. Although the principle of operation is the same as in the company's standard equipment, the form which this new Octopus bar takes and the method of applying it to a machine are its novel features. It may be

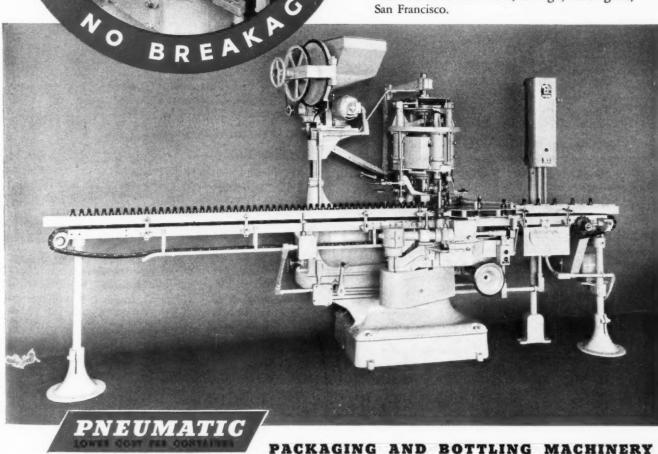
Sok into PNEUMATIC'S "LOWER COST PER CONTAINER"

CAPPING

What has this Pneumatic Capper got that makes it such a smooth operating, money saving performer? The answer is (1) Continuous rotary intake that handles glass GENTLY (2) Positive, gentle transfer of caps from hopper to bottle (3) Two-speed chucks accommodate both C. T. and lug-type caps (4) Single crank adjusts height of both the cap feed and the capping head (5) No gears to change—variable speed drive is standard equipment (6) Sensitive chucks apply caps to uniform, predetermined tightness.

These design advantages PLUS Pneumatic's precision machining of *every* individual part combine to give you "Lower Cost Per Container Performance". Send for complete bulletin on Pneumatic Capping Machines.

PNEUMATIC SCALE CORPORATION, LTD. Main office: 82 Newport Ave., North Quincy 71, Mass., Branch offices: New York, Chicago, Los Angeles, San Francisco.



Over ninety different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

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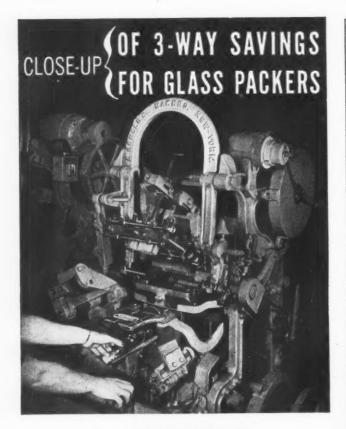
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...on the **ERMOLD**Semi-Automatic Labeler!

Saves Time—Changeover from one size jar or bottle to another is quick and easy. In a matter of minutes, it's ready to go—on another product in your line.

Saves Equipment—One Ermold Semi-Automatic Labeler is enough to take care of a wide variety of sizes, styles and shapes . . . from gallon containers down to tiny ampules.

Saves Maintenance Costs—Simple operation and sturdy

construction—especially of moving parts—reduces machine jamming, upkeep and repair bills to a minimum.

... For volume output of standardized lines, your best bet is the Ermold Automatic Multiple Labeler. It labels 4, 6, 8 or 10 jars or bottles at one time ... on sizes from splits to quarts ... at an economically slow speed of only 20 cycles per minute.





Over 67 years of labeling leadership

EDWARD



COMPANY

652 HUDSON STREET, NEW YORK 14, N. Y.

Equipment and Materials

(Continued)

mounted above the machine at such a height that it will be out of the operator's way. Only the branch applicator cables furnished in any desired length, drop down to the critical work area. The metal-encased bar may, therefore, be applied advantageously to the feed piles of a printing press, the cables dropping down to areas on the pile where static causes the paper to stick. The bars have as many cables as there are areas on the machine where static may give trouble. They may be allowed to hang free or can be supported in any desired position by means of clamps. A power unit is connected to the bar by means of high-tension cable which can be run either in the air or by a special method in electrical conduit.

SEAL FOR OPENING CELLULOSE BANDS

The "Zip-Seal" made by Stoffel Sales Corp., Tuckahoe, N. Y., is designed to permit easy opening of cellulose caps and bands from bottle tops without the use of scissors, knives or other



sharp instruments. In addition to being a convenient and practical device, it is also a safety measure to the ultimate consumer in that it protects the glass-container top from becoming chipped in the opening. Made of aluminum, the seals can be lithographed in any colors and furnished with string, ribbon or wire attached in the various lengths. They are available in two sizes—⁷/₁₆ and ³/₄ in. in diameter—and are

applied simply by laying the attached string over the top of the bottle prior to the application of the cellulose cap or band. They should prove of interest to manufacturers and packers of chemicals, pharmaceuticals, wines and liquors.

VINYL PRESSURE-SENSITIVE TAPE

Minnesota Mining & Mfg. Co., St. Paul, Minn., is now distributing a new vinyl-plastic, pressure-sensitive tape which, it is claimed, may be easily applied to bottles and cartons to form a waterproof seal. The tape is said to have high stretch, 175% elongation at breaking point, with a slightly higher stretch in the transverse direction. Trademarked "Scotch" plastic-film tape, it is available in yellow, black and white, 36-yd. lengths, 1/4 to 22 in. widths and a thickness of 7 mils. According to the producer's tests, it has excellent resistance to acids, alkalies, water, salt water, alcohol, aliphatic hydrocarbons and oils. It is soluble in ketones and certain esters.

THERMOPLASTIC MATERIAL AIDS HEAT SEALING

U.M.A., Inc., New York, announces immediate availability of "Teflon," a thermoplastic material made by E. I. du Pont de Nemours & Co., Inc., which may be used to cover the jaws of conventional heat-sealing machines when sealing such films as cellulose acetate, to avoid softening and sticking of the acetate to the jaws of the sealer. This material is said to be stable at very high temperatures and to possess surface characteristics that prevent its adhering to the material or the jaws of the machine.



LEADERS' CHOICE for BETTER PACKAGING

Yes, leading manufacturers in almost every branch of our great American economic system choose Old Dominion for their packaging service. For whatever the product may be — textiles, furniture, food, machine tools, cosmetics, candy or shoes.— Old Dominion offers a superior package for every job.

Consult Old Dominion today about your packaging plans. Their experts will be pleased to assist you in set-up, corrugated, canister, folding and acetate types of containers. Send for General Line Folder #92.



THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

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Which would you say is your Biggest Problem?



Want to Improve Appearance? Bostitch staples make neat, unobtrusive seal; do not affect legibility even when necessary to staple over printing.



Trouble in Shipment? Bostitching cartons top and bottom makes strong closure, forestalls losses due to pilfering and loosening by dampness.



Costs Too High? Bostitch self-feeding hammer cuts time two-thirds . . . also saves on materials, attaching burlap over open head of barrel.

Investigate Bostitching with its complete line of stapling, tacking, and wire stitching machines. Users, starting with small, inexpensive equipment, can change to larger, faster Bostitch machines as conditions warrant. Mail coupon for facts covering representative models; they may suggest an application you can use to lower costs or improve fastening.

BOSTITCH A Complete Line for Shipping Rooms



Autoclench seals tops of corrugated containers after filling.



Bottom sealers staple or stitch bottoms — foot- and motor-driven.



Spring-driven tacker drives staples like two-pointed tacks — in exact location.



Plier-type seals flexible corrugated wrappings, light and fairly heavy containers.

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| BOSTITCH 512 Mechanic Street, | Westerly, | R. I. | | | | | | | | | |
| Please send literature | checked | | #175 #132 | | | | #15 | 7 | Ca | ırd | ing; |
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| Address | | | | | | | | | | | |
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CAMBRIDGE CONTAINERS are desire to buy . . . and MAKE SALES.

CAMBRIDGE PAPER BOX COMPANY

196 Broadway, Cambridge 39, Mass.

New York City

Providence, R. I.

Rectangular & Round Boxes · Plastics · Labels & Allied Products

APRIL 1948

211



GRACEFUL contours and purity of line make this Carr-Lowrey stock bottle a popular favorite for perfume and toilet water. Manufactured of finest flint glass and to exacting specifications, it very ably meets the need for a stock container within the commercial price range. Be sure to check with your nearest Carr-Lowrey office on your glass container needs. A wide variety of designs and sizes is immediately available from stock.

Samples of the container illustrated, number 404, and any additional information you may need will be furnished promptly upon inquiry.





warm....
soft....
persuasive
COLR

Just one second! Not much time but that is all a good display asks—or needs—to stop the eye of the passer by. With the help of color lithography in the hands of craftsmen, your displays, too, can emanate pleasant impressions of your product that make people say, "That's for me!" To quickly transmit sales ideas that stir the emotions—and the buying impulse—count on color lithography to do a better job. And for lithography at its best, count on L. & S.



NG

LUTZ & SHEINKMAN color lithographers

421 HUDSON STREET, NEW YORK 14, N. Y.



Plants and People

H. Lyle Greene, formerly sales director, has been elected president of the J. L. Ferguson Co., Joliet, Ill. R. A. Stephen, formerly executive vice president and treasurer,



J. L. Ferguson

H. L. Greene

R. A. Stephen

becomes vice chairman and J. L. Ferguson, Sr., chairman of the board. Miss Estella L. Koenig continues as a director and secretary of the board. Other officers include Robert C. Ferguson, executive vice president and treasurer; Ralph J. Scherer, secretary; Peter D. Bowley, vice president in charge of West Coast factory-branch operations; Carl Claus, vice president in charge of Eastern operations; P. A. Steed, vice president in charge of production. J. Lee Ferguson, Jr., remains a vice president of the company and is president of Printing Equipment Corp., a Ferguson subsidiary.

James L. Rodgers, Jr., has been appointed general manager of American Cyanamid Co.'s newly formed Plastics and Resins Division. The new division represents a consolidation of three departments—the Plastics, the Ion Exchange Products and the Coating Resins Departments—and was formed to provide more cohesive facilities for research and market development. Mr. Rodgers was formerly general manager of the Plaskon Division, Libbey-Owens-Ford Glass Co.

The formation of Martin-Beadle Co. to pre-package and ship fresh fruits and vegetables under its own brand as well as on a contract basis has been announced by E. D. Beadle and A. L. Martin. The company has leased a building in Pasadena, Calif., where its first packaging machines will be built and tested. First pre-packaging contracts with retailers and wholesalers will be executed beginning this June or July.

Mr. Beadle who was formerly Pacific Coast manager of the Pliofilm division of The Goodyear Tire & Rubber Co., will be in charge of production. Mr. Martin recently resigned as director of research, distribution and marketing for the Western Growers Assn. He will be responsible for sales and promotion. Associated with Mr. Beadle and Mr. Martin will be **Charles L. Weckesser** as head of development engineering and research department.

The Rapids-Standard Co., Inc., Grand Rapids, Mich., manufacturers of materials-handling equipment, announces the election of James R. Sebastian as president and general manager. Mr. Sebastian succeeds Lloyd C. Backart, who was named chairman of the board of di-

rectors. Mr. Backart, who was also sales manager, will continue in that capacity. Other officers elected were Roger S. Calvert, secretary-treasurer; Paul F. Millett, Howard R. Pearl and Robert L. Gunnell, vice presidents; Eugene L. Hummell, assistant secretary and treasurer.

Announcement has also been made that a new plant, containing 52,000 sq. ft. of floor space, is now under construction in Grand Rapids, and will be occupied by Rapids-Standard in September.

Monsanto Chemical Co., St. Louis, has established a sales office in Portland, Ore. The office is located at 421 S. W. Sixth Ave. and will be staffed by **Baxter Pearson**, representing chemical and plastic sales, and **W. W. Hayes**, in charge of coatings and adhesives.

James A. Wilson, plant manager at the headquarters of Monsanto's Merrimac Division in Everett, Mass., has been appointed production manager for the division. Mr. Wilson will be succeeded as plant manager by Russell L. Miller, plant superintendent.

E. W. Dwyer of Monsanto's Industrial and Public Relations Dept., was one of the American representatives at the Chemical Industry Conference of the International Labor Organization held in Paris from April 6 to 17.

Malcolm A. Peak has been appointed manager of the Standard Line Division of Old Dominion Box Co., Char-

M. A. Peak

lotte, N. C. Mr. Peak has been associated with the company for the past 27 years, starting as a clerk and serving as production superintendent, purchasing agent and sales manager for various divisions.

Thatcher Glass Mfg. Co., Inc., Elmira, N. Y., has opened a district office at Indianapolis, Ind. James J. Glynn is district manager of the territory, which includes Cleveland and Cincinnati, Ohio, and Detroit, Mich. A. D. Peters has been named salesman in

the Indianapolis office. Announcement has also been made of the appointment of **Thomas J. Donohue** as representative for the Boston office, replacing **Paul A. Welbourne**, who has been moved to Thatcher's New York City office.

E. G. Schreibeis has been appointed general manager of the **Rutherford Machinery Division** of **Sun Chemical Corp.**, New York. **L. E. Ditsler** has rejoined the organization as Western sales manager in charge of their Chicago office at 24 N. Racine Ave.

The Peters Machinery Co., Chicago, originator of the Peters carton, is celebrating its 50th anniversary this year. Developed first for bakery goods, this form of carton and the equipment developed to pack it has extended its uses to many different lines.

Announcement has been made of the establishment of Woods-Dryden Paper Bags, Ltd., Winnipeg, Ont., a new

We shall demonstrate a new hydraulic roll to roll Four Color Aniline Printing Press the

"Wolverine HYDRO-PRINTER"

A new departure in Aniline Press design, heralding a new era of printing progress and advancement.

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Automatic Ink Roller Washing Machine "PERFECTO"

Visit our Booth #643 at the Packaging Exposition Cleveland, Ohio, and

See for yourself!

WOLVERINE PAPER CONVERTING MACHINERY CORP.

19210 Stansbury Avenue, Detroit 21, Michigan

"TEFLON"

The Miracle Packaging Material wherever heat is used for sealing.

Does not leave coating on heating plates. Keeps production going—saves time and money.

IMMEDIATE DELIVERY

Large or small quantities

U.M.A., INC.

56 Cooper Square

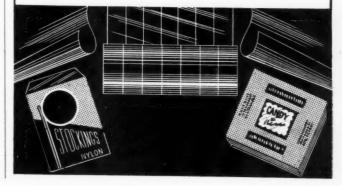
New York 3, N. Y.

AL 4-0924



WHITING-PATTERSON

Cellophane—Acetate—Foil—Paper Printed by Multicolor Gravure Precision folding, slitting and sheeting 13th and Wood Sts., Philadelphia 7, Pa.



Plants and People

company for the manufacture of grocery bags, notion and millinery bags, shopping bags, duplex and triplex bags formerly produced separately by Woods Mfg. Co., Ltd., and Dryden Paper Co., Ltd. H. Roy Crabtree, president; E. Lorne Goodall, vice president; J. Buffie, general manager; R. B. Moffit, secretary-treasurer, and R. R. Mc-Lernon have been elected directors. Sales are handled by Dryden Paper Sales, Ltd., of which Gordon Bennett is vice

Following completion of a \$2,000,000 plant and facilities expansion last year, The Dobeckmun Co., Cleveland, Ohio, has announced a number of sales appointments: W. R.





R. A. Hickman

ager with offices at the Berkeley plant; Walter Wilhelm to take charge of the

Caldwell as sales manager of the

new Southern di-

vision with head-

quarters in At-

lanta; R. A. Hick-

man as San Fran-

cisco sales man-

newly established office in St. Paul; D. R. Moroney to the Milwaukee office and Earl Schimkola to manage the Kansas City territory.

Bemis Bro. Bag Co., St. Louis, Mo., has purchased a 27acre industrial site near Wilmington, Del., for the construction of a paper-bag manufacturing plant. This will be the 28th Bemis plant and the seventh one in which multiwall shipping sacks are manufactured.

Detecto Scales, Inc., will move to new quarters in a factory building at 540 Park Ave., Brooklyn, some time this summer. This will enable the company to consolidate all manufacturing operations under one roof.

Harry Fetzer has been appointed as a special representative of the Sylvania Division, American Viscose Corp., with headquarters in New York. Succeeding Mr. Fetzer as manager of the New York sales office, will be Emil Farris, formerly head of the Philadelphia sales division. Thomas O. Williams replaces Mr. Farris as branch manager in Philadelphia.

Fred Meendsen has been appointed sales promotion manager of the Union Bag & Paper Corp., New York. Mr. Meendsen was formerly manager of market research.



Fred Meendsen

Other appointments made at the same time by the company are: Karl Smith as merchandising manager of standard product sales: T.F. Duffy as northeastern district manager of standard products sales; R. Davis, Jr., as southern district manager, standard bag sales, and R. J. Harley, district manager, corrugated container sales.

The Ottawa River Paper Co., Toledo, Ohio, announces the appointment of Frank J. Sullivan as manager of specialty sales. His appointment marks the first step in the company's re-entering of the specialty display field. During the war-shortage years, the firm discontinued manufacturing of corrugated display stands and other merchandising material.

The board of directors and stockholders of the New Jersey Machine Corp., Hoboken, N. J., has elected Richard Wellbrock vice president in charge of sales and Richard Dede vice president in charge of production. Both of the new officers were also appointed to the board of directors.

Continental Can Co. announces the purchase of the former Wright Aeronautical Corp. plant in Paterson, N. J., which will be modernized and equipped for the manufacture of cans. The plant consists of three buildings with more than 700,000 sq. ft. of space and eventually will employ 2,000

Halmond L. Parks has joined Ball Bros. Co., Muncie, Ind., as director of quality control. Mr. Parks will direct the conduct of the program for quality control applied to the manufacture of glass containers, zinc, rubber and paper products in the company's home plant. He will also supervise controls in the eight other Ball plants.

Universal Folding Box Co., Inc., of Hoboken, N. J., expects to occupy a new building in Hoboken in June. The new building will give the company an additional 50,000 sq. ft.

General Electric Co. announces the initial shipment from the newest of its six plastics plants at Decatur, Ill. It is expected that the new molding plant will eventually employ between 400 and 500 persons when the remainder of 130 presses has been installed.

F. I. Jacoby, vice president and general superintendent of Riegel Paper Corp., New York, has retired after 41 years with the company. He will continue to serve on the



board of directors. G. Lamont Bidwell, who has been superintendent of the mill department at Milford, N. J., becomes manager of that plant. R.L. Kerridge, who has been an assistant to Mr. Jacoby, becomes manager of the mills at Warren Glen, Hughesville and Riegelsville, N. J.

Dr. James E. Gates, formerly a member of WPB's Container Division, has joined the consulting staff of Con-

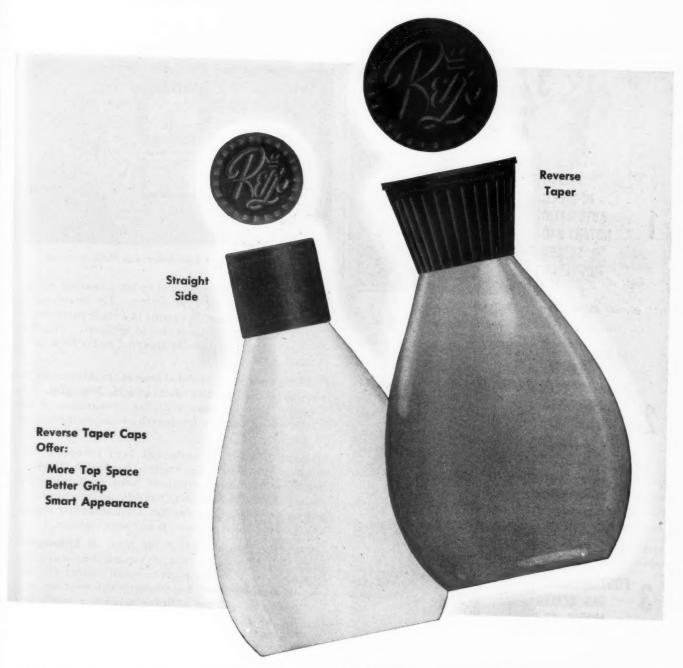
tainer Laboratories, Inc., Chicago. Dr. Gates will assist in research and consultation services offered to package makers and package users.

River Raisin Paper Co., Monroe, Mich., manufacturers of corrugated and solid fibre shipping containers and packing materials, has re-entered the advertising-display field. The company, which has its own art-display studio, laminating and printing departments, has organized a complete display department for creating and producing dimensional displays in corrugated, metal, wood, glass and plastic.

William L. Morrow, for the past 16 years associated with The American Paper Goods Co., New York, has been appointed divisional sales manager of the Western Division of that company.

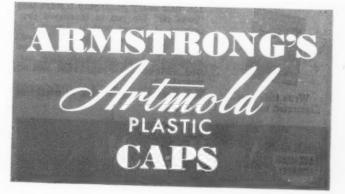
Mosstype Corp., Brooklyn, announces the appointment of Henry Myers as special field service representative in the

REVERSE TAPER CAPS



Putting an Armstrong's Reverse Taper Cap on your package not only enhances the appearance of your package but the extra top space permits you to give better display to your name or trade-mark. Large display, in sparkling color, right on top of your package means quicker consumer recognition.

quicker sales. For design and color suggestions and cost estimates including mold costs, send a sample or drawing of your package to Armstrong Cork Company, Glass and Closure Division, 5904 Prince Street, Lancaster, Pennsylvania,



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Amsco

ALL THE FEATURES YOU WANT FOR BETTER BAG SEALING MODELS (OF MANY) TO FIT YOUR EXACT REQUIREMENTS

AMSCO HI-SPEED AUTOMATIC ROTARY BAG SEALER MODEL DC

Calif.

Oakland,

S.

Machine

Wrapping

Midwest)

II.

Chicago,

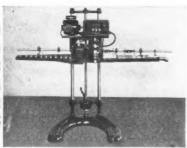
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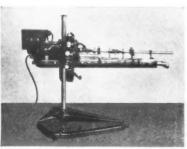
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Wrapping

Miller



AMSCO HI-SPEED AUTOMATIC ROTARY BAG SEALER MODEL S



AMSCO
FOOT OPERATED
BAG SEALER
MODEL SS-7



FREE



Write today for illustrated brochure

You find every packaging feature that "pays off" for you in increased production at lowest cost in Amsco bag sealing machines. Maintain a fast, steady flow of sealed bags with no handling—bags automatically carried through folding, and sealing operations.

No other machines offer so much for so little!



Plants and People

New York area. **Ed Larsen** succeeds Mr. Myers as assistant production manager of the firm.

T. W. Koch, director of advertising and sales promotion for Shellmar Products Corp., Mt. Vernon, Ohio, and John Stover, president of the John Stover Advertising Agency,



T. W. Koch (left) and John Stover view Shellmar award.

Columbus, hold plaque awarded by the Columbus Advertising Club's Ad-of-the-Year contest. The award, given annually for the best ad appearing in a trade paper, is the second consecutive one presented to Shellmar. The winning four-color advertisement appeared on the back cover of Modern Packaging.

Phil Dillon has been appointed head of the recently established San Francisco sales office of Pacific Press, Inc., Los Angeles. The new office will offer an extension of the firm's printing facilities for quantity runs, particularly in color work

Malcolm Hirschey, formerly with Ford Instrument Co., has been appointed design engineer for Adolph Gottscho, Inc., New York manufacturers of industrial marking machines. Kenneth H. Kuett, formerly design engineer, is now product engineer for the firm, while Alexander van der Lyn, former product engineer, is now sales engineer.

Construction has started at the plant of **Rhinelander Paper Co.**, Rhinelander, Wis., to expand their production facilities. The company plans to install another #7 paper machine similar to the "Big Swede" which went into production in 1942. Other additions planned include a new finishing room, new warehouse, water filtration plant, boiler house and enlarged office facilities.

Modern Containers, Inc., is the new name of the firm formerly known as Mohan Containers Co., 3320 E. Olympic Blvd., Los Angeles, Calif.

George W. Cobb, Jr., head of the public relations department of American Can Co., New York, died March 14 after a long illness. He joined the Rochester sales office of American Can in 1926 and later went to the company's research laboratories at Maywood, Ill., where he specialized in the technology of food canning. He was advertising manager of the company when he left for military service in 1942. He was retired for disability from the Army as a lieutenant colonel after serving in the Quartermaster Corps Procurement Division.

making a good impression...

Driscoll Coverwell Inks can make an important contribution to the effectiveness of your next package printing job. Black and white or 4-color process . . . letterpress, offset or silk screen . . . super-finish, cellophane or bristol—versatile Driscoll Inks mean eye-catching, sales-boosting packages. Hundreds of select colors to choose from, each one carefully formulated to meet your specific requirements. For a good impression every impression always use Driscoll Inks.





MARTIN DRISCOLL & CO.

BRANCH: 407 E. MICHIGAN ST., MILWAUKEE, WIS.

Affiliated Concern: Great Western Printing Co., Portland, Ore.



THE new Four Color Bagprinting Aniline Printing Press for Bagmachine, Sheeter or other converting machine hook-up. Intraframe construction with entirely new mechanical features. Acclaimed the finest Aniline Printing Press on the market and the Press of the Future.

The only American built—Ideal #4 Two Color Paper Seal Embossing Press for the manufacture of fancy foil and paper labels and seals—also fancy small boxes in one operation.

Stoessel $9" \times 12"$ Automatic Cylinder Press. Look it over—and you'll be sure to like it.

Visit our Booth #643 at the Cleveland Packaging Exposition, Cleveland, Ohio.

All machines will be demonstrated.

NASKO Machinery Corporation

19210 STANSBURY AVENUE DETROIT 21, MICHIGAN



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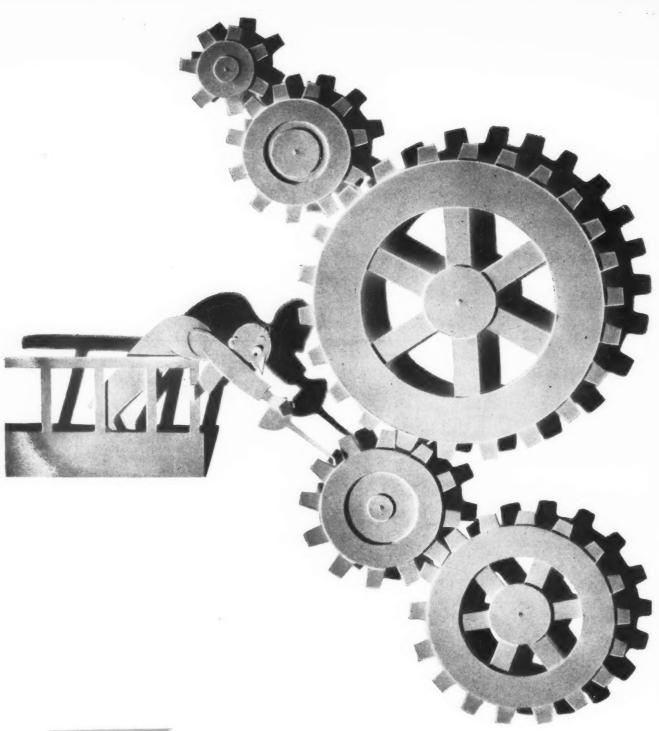
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FACILITIES

Geared to produce the finest in folding cartons.

Any quantity—any size.

CHICAGO
CARTON 4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS
COMPANY



If your products are as difficult and expensive to pack as olives—if they are non-uniform in size, hard to weigh and hard to fill—then the cost-cutting efficiency of this olive packer bears directly on your problem.

Specially designed and specially built by Codie-Kay, this machine has increased packing efficiency at the Grogan plant 340%. It saves them \$76 per day in labor. It saves up to 75% of the olives formerly squandered as a result of overweight packing. According to company officials, the machine paid for itself in its first season of use.

This olive packer is the only fully automatic, allelectric, weight-controlled packer in the industry. Regulation is centralized in one master control panel. It fills by weight and not by count or volume—saves from 4 to 9 olives per can. It's fast—speeds are limited only by the capacity of can and bottle capping equipment. The positive feed system cannot clog.

The basic design of this remarkable machine can be applied to the packing of many similar foods . . . perhaps to yours. Consequently, if you are on the lookout for new, faster and more efficient ways to pack, inquire now for full details. Address your letter to Codie-Kay Co., 1139 San Julian Street, Los Angeles 15, California.



SPECIALISTS IN THE DESIGN AND MANUFACTURE OF COMPLETE PRODUCTION PACKAGING SYSTEMS.

IF STANDARD EQUIPMENT WON'T DO THE JOB, CODIE-KAY WILL.

size.

NOIS

GING

ONE WAY TO LICK



JUNIOR FORMING AND LINING MACHINE. Sets up 35-40 cartons per minute. Requires one operator.

Higher Packaging Costs!



JUNIOR FOLDING AND CLOSING MACHINE. Closing 35-40 cartons per minute. Fully automatic.



SENIOR FORMING AND LINING MACHINE. Sets up 55-60 cartons per minute. Fully automatic.

Today, more manufacturers are looking for ways to reduce costs in their carton packaging departments.

One of the most expensive and wasteful items in carton packaging is the setting up and closing of cartons by hand methods.

Why worry about personnel problems, the packaging skill and performance of your employees—when you can do a better job by installing one or more of the PETERS machines illustrated?

PETERS machines are designed to give you better uniformity, less waste and to speed up production. You can drive these mechanical servants unmercifully, hour after hour and still receive the same high degree of skill unmatched by human hands.

Send us samples of the cartons you are now using and we will gladly make specific recommendations for your specific requirements.

Visit our booth #512 at the 17th Annual AMA Packaging Conference and Exposition, Cleveland April 26 to 30.



SENIOR FOLDING AND CLOSING MACHINE. Closes 55–60 cartons per minute. Fully automatic.

PETERS MACHINERY CO.

4700 Ravenswood Avenue, Chicago, Illinois

1,200 per minute!

from paper roll to finished wrapper in one run on one press

If your objective is ultra-high speed production of wraps, packages, labels or tags, then you need the Chambon press. In one pass this remarkable machine will print, number, emboss, perforate, score, die-cut (ROTARY), sheet-cut, and rewind. At the Beech-Nut plant, for example, the familiar 5-color gum wrapper shown here is produced at rates of 75,000 per Chambon press per hour.

Here's how it works. The units performing each of the operations involved are mounted in tandem on a single press base. There's direct, uninterrupted feed from each unit to the next. All units operate at interrelated speeds—there's no piling up, no idling, no lost time between one stage and the next. The entire operation is automatic.

Moreover, the Chambon press is exceptionally flexible; depending on the job you're running, you can add or subtract units performing specific operations. They're all easily mountable and demountable on the press bed. You can

PEPPERMINT
FLAVORED

PEPPERMIN

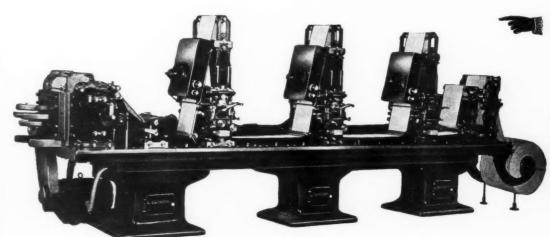
LC 2

MEC 4

get the Chambon to print as many as 8 colors, and it can print letterpress, rotogravure or offset.

The production speeds and economies which the Chambon make possible, should be of the highest interest to firms engaged in the mass-packaging of consumer goods or in the volume production of package components.

A Chambon engineer will be glad to discuss details of this remarkable machine at your request.



You can get a Chambon press with any desired combination of printing and converting units mounted on the press bed. Here, for instance, is the Chambon equipped for 3-Color Rotogravure with 360 degree Running Register, and Die-cut Unit.

Chambon Ltd. Standish Road London W 6

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L. CHAMBON
CORPORATION

318 West 46th St. New York 19, N.Y. COlumbus 5-4866

Machines Chambon 68 Rue deCrimée Paris (XIX) «

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For Your Information

Feature of the 51st annual meeting of the American Society for Testing Materials, to be held in Detroit from June 21 to 25, will be a lecture by Dr. Paul Aebersold of the Atomic Energy Commission. He is expected to discuss the industrial applications of atomic materials. During the meeting, some 20 technical sessions will be held, along with 300 committee meetings. A.S.T.M. President T. A. Boyd will address the annual president's dinner, June 23.

Planning for the largest turnout in its history, the **Super Market Institute** announces that its Eleventh Annual Convention will be held in Chicago at the Hotel Stevens, from May 23 to 27. **Glenn R. Grife,** of **Red Owl Stores** is general chairman for the convention.

A preliminary report of a survey on the sales-building effectiveness of window displays will be given at the annual meeting of the **Point of Purchase Advertising Institute** May 12 at the Hotel Biltmore, New York. The survey, started in Rochester and Syracuse, N. Y., March 15, will not be finished until June 1, but Fact Finders Associates, who are conducting the test for the Institute, have arranged to report some of the early results.

The University of Illinois will conduct a packaging and materials handling "short course" as part of the Industrial Packaging Engineers Assn.'s third annual exposition, according to Paul O. Vogt of General Electric Co., association president. The show itself will run from Oct. 5 to 7 at the Hotel Sherman, Chicago, and the "short course" will start a day earlier.

Development of gummed tape adhesive by **The Gummed Products Co.**, Troy, Ohio, is described and illustrated in a 14-page booklet titled "The Story of GP Adhesive," recently published by the company. Copies are available on request to the firm.

What's doing

April 26-30—American Management Assn., Packaging Exposition and Conference, Public Auditorium, Cleveland.

May 7—American Institute of Chemists, annual meeting, Hotel Waldorf-Astoria, New York.

May 9-12—National Paper Box Mfrs. Assn., 30th annual convention, Hotel Netherlands Plaza, Cincinnati

May 12—Point of Purchase Advertising Institute, annual meeting, Hotel Biltmore, New York.

May 18–20—**Toilet Goods Assn.,** 1948 convention, Hotel Waldorf-Astoria, New York.

May 22–25—Packaging Machinery Mfrs. Institute, Homestead Hotel, Hot Springs, Va.

May 23-27—Super Market Institute, 11th annual convention, Hotel Stevens, Chicago.

May 24-26—**Proprietary Drug Assn.**, Claridge Hotel, Atlantic City.

The Eighth Graphic Arts Production Yearbook, covering all the important developments of 1947 and 1948 in that field, has been published by Colton Press, Inc., 468 Fourth Ave., New York 16, N. Y. The yearbook is priced at \$15.

Bemis Bro. Bag Co., St. Louis, Mo., has published a booklet describing the uses of waterproof laminated textile bags in packing, storage and shipping. Type of bags and methods of closing are explained. The title of booklet is "A Book You Can Bank On to Save You Money." Copies may be obtained on request to the company.

The Michigan division of Industrial Packaging Engineers Assn. announces the election of Harry G. Diefendorf as president. F. F. Holt, General Motors Corp., was elected vice president of packaging; J. Alex Gordon of Gordon & Kinney, vice president of materials handling, and T. C. Lewis of Micromatic Hone Corp., vice president of transportation. R. B. Hiltz, Hinde & Dauch Paper Co., was elected secretary and Edmund R. Meyer, Ford Motor Co., treasurer. C. E. Cox, Gerrard Steel Strapping Co., was elected chairman of the program committee; I. E. Thomas of Ford Motor Co., chairman of the membership committee, and V. Lee Edwards of The Charles A. Strelinger Co., chairman of the publicity committee.

New chairman of the executive committee of the Waxed Paper Institute, elected at the recent annual meeting, is William P. Patterson, executive vice president of the Specialty Papers Co., Dayton, Ohio. C. C. Sherman, president of the H. P. Smith Paper Co., Chicago, was elected vice chairman. Elected members of the executive committee were John Snyder of Marathon Corp., Edgar L. Berkley of Waxide Paper Co. and Louie Kimple, Dixie Wax Paper Co.

Specifications and performance-test results of **Elliott Mfg. Co.** case sealers, as well as other Elliott food-processing machinery, are outlined in Bulletin No. 100, which may be secured by writing to the company at Fresno, Calif.

At the annual meeting of The Waterproof Paper Mfrs. Assn. at the Biltmore Hotel in New York, George C. Wilkins of Specialty Converters, Inc., was elected president of the association to succeed Guy E. McCorison of Thilmany Pulp & Paper Co. Other officers include Frank Hall of Chase Bag Co., vice president, and Philip O. Deitsch, administrative officer. Elected members of the board. were: H. A. Anderson, of The Sisalkraft Co., Claude N. Campbell of National Waterproofing Co., James F. Doyle of Arkell Safety Bag Co., Stephen A. Feely of Keystone Roofing Mfg. Co., J. D. Johnston of W. Ralston & Co., Inc., A. J. Thiel of Angier Corp. and Guy E. McCorison.

Samples of decorative box-covering papers, with costs, have been collected in a booklet by **Charles W. Williams & Co., Inc.,** 303 LaFayette St., New York, and may be secured without charge by writing the company.

Charles P. Taft and Arthur C. Babson will be two of the

FREE to designers,

engineers, fabricators
of transparent
packaging...

This authoritative
new book provides all
the facts needed—
specifications, properties,
performance data,
to handle
Kodapak Sheet
efficiently.

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How will Kodapak Sheet stand up in a store window on a hot summer day...at low temperatures...or when subjected to prolonged damp storage?

"Properties of Kodapak Sheet" gives you the data to answer such pertinent packaging questions. It enables you to decide just which one of the Kodapak Sheet formulations and gauges suits your situation to a "T."

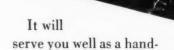
Classified under such headings as thermal, chemical, mechanical, and optical properties, the information is based on years of studying customer service problems, and on exhaustive research and testing in the Kodak laboratories.

Kodapak Sheet

FOR THE DISPLAY YOU WANT
... THE PROTECTION YOU NEED

T. M. Kodapak Reg. U. S. Pat. Off.

Be sure to visit the Kodak Exhibit, No. 111, at the Packaging Exposition, Cleveland Auditorium, April 26-30, 1948



book and, because it supplies a wealth of new material, may readily suggest new and profitable packaging ideas. Send for "Properties of Kodapak Sheet." You'll find it well worth studying.

Cellulose Products Division
Eastman Kodak Company, Rochester 4, N. Y.

Send
for your
FREE copy
of
"PROPERTIES
of KODAPAK
SHEET"





WALDRON

MACHINES

Materials For Packages m Were Produce On WALDRON MACHINES can Can Co. on Co. of America Columnso Plastics Corp. Crawn Cork & Seol Co. Dobackmun Co. Gaylord Container Corp. Kupfer Bres. Co. Milprint, inc. Baynolds Metals Co. Biogal Paper Co. Sylvenia Div. U.S. Envelope Co and others

Part of the pictures of popular packages are the WALDRON Converting Machines used in processing and finishing the packaging materials. For Coating, Printing, Saturating, Waxing, Embossing, Laminating, Waterproofing and similar operations on paper, fabric, foil, film, etc., WALDRON machines are practically standard equipment throughout the industry. There's a WALDRON machine to give added beauty, durability, utility to your packaging product. Consult us on your needs.

The experience of our Research and Development Staff and facilities of our Testing Laboratory are at your service.

JOHN WALDRON CORP. Main Office and Works New Brunswick, MACHINES New Jersey

For Your Information

(Continued)

featured speakers at the 30th annual convention of the National Paper Box Mfrs. Assn., to be held at the Netherlands Plaza, Cincinnati, May 9 to 12. Reservations are now being accepted at the hotel.

A convenient-sized calculator and corrugated-box selector, published by the **Fairfield Paper Co.**, Baltimore, Ohio, gives corrugated box users a tool to find easily the basic



standards given in Section 3, Rule 41. Single-wall box requirements are given on one side of the selector, while the double wall data is given on the other side. Any interested person may obtain a copy on request to the company.

"How to Use and Prepare Glues," published by **National Adhesives**,

270 Madison Ave., New York, provides detailed information on all types of adhesives and their properties. Copies are available without charge from the company.

Copies of book No. 142, containing samples of Leathertex paper, are being distributed by **Hampden Glazed Paper & Card Co.**, Holyoke, Mass.

Standardized shapes and sizes of metal tags for marking, identification and shipping purposes are illustrated at actual size in a new catalog issued by **The Metal Marker Mfg. Co.,** 1384 E. 40th St., Cleveland, Ohio. Copies of the catalog are available upon request.

Recent developments in plastics raw materials, their physical properties, characteristics, methods of fabricating and typical uses are explained in the new catalog, "What Monsanto Plastics Can Do for You," issued by the Plastics Division, Monsanto Chemical Co., Springfield, Mass. Requests for copies should be addressed to the firm.

Candy manufacturers interested in high-speed wrapping machines will find the specification folder on the AMF Rose FWT fold-wrap twisting machine of interest. Copies of this folder, DM 1361, will be sent to readers who write to Rose Candy Machinery Div., American Machine & Foundry Co., 485 Fifth Ave., New York.

Photographic evidence of the modern materials-handling techniques being used in the food industry, along with brief case histories, are presented in a 20-page booklet put out by the Tructractor Division of **Clark Equipment Co.**, Battle Creek, Mich. Copies may be had from the firm.

A comprehensive bulletin illustrating new mechanical achievements in high-speed rotary fillers is available from **U. S. Bottlers' Machinery Co.,** Dept. 12, 4015 N. Rockwell St., Chicago.

Minnesota Mining & Mfg. Co. offers a new 28-page brochure entitled "3M Adhesives in Industry." The booklet contains help for industrial customers in choosing the right adhesives, sealers and coatings. Requests for copies should be sent to the firm, 901 Fauquier Ave., St. Paul.



OXFORD makes many different grades of paper, and aims to make each one the highest quality of its kind.

To help assure this quality, there is Oxford's careful control of every step in papermaking—from mammoth stock piles of the right kind of pulpwood through each process to finished paper.

More than 300 automatic controls, for example, are used to insure uniformity in our papermaking process. During each day's run, testing laboratories constantly check samples. Other samples are actually printed to check proper performance.

These controls and tests—together with the long experience of Oxford's papermakers, many of whom have spent their entire lives at Oxford—are the basic reasons for the high quality of Oxford papers.

Paper merchants in key cities, coast to coast, handle these quality papers. Bring your printing problems to them for practical assistance in securing better results where printing jobs must be right.



Included in Oxford's line of quality printing and label papers are: Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N.Y.

MILLS at Rumford, Maine and West Carrollton, Ohio

WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1 Ill. DISTRIBUTORS in 48 Key Cities

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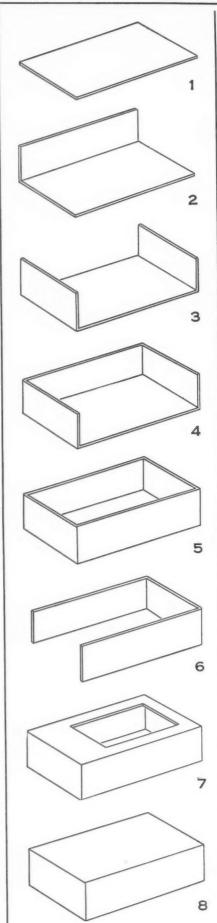
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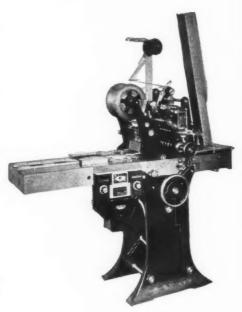


packaging costs go down when you use cardboard forms

Cello-wrapped on HIGH-SPEED Scandia machines

You get MAXIMUM VISIBILITY
—MINIMUM MATERIAL COST
when you cello-wrap on cellosaving, tight-sealing Scandia
Machines.

- 1. Plain board suitable for group packaging or as a package base.
- Board with single flange where packaging requires a rigid side to maintain contour.
- 3. "U" shaped cardboard to protect products from side pressure, or give form to cellophane.
- 4. 3-sided tray where required to give greater stability to package.
- Standard 4-sided tray, or collar, open at top, or top and bottom.
- 6. 3-sided collar for 3-sided visibility of product.
- 7. Conventional "window" package.
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U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U.S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted

Method of Impregnating Regenerated Cellulose Rope, H. Dreyfus, D. Finlayson and R. G. Perry (to Celanese Corp. of America, a corporation of Delaware). U. S. 2,131,912, Jan. 27. Process for improving the properties of rope composed of filaments of regenerated cellulose of at least 2 gm. per denier. The rope is impregnated with a solution of a cellulose derivative, such as ethyl cellulose, in a mixture of castor oil, butanol and xylene.

Container-Positioning Mechanism for Filling Machines, R. E. J. Nordquist (to American Can Co., New York, N. Y.). U. S. 2,434,952, Jan. 27. A centralizing device for selectively locating different sized containers at a working station whereby a body member rotatable into different selected positions, with spaced side wings on the sides of body member, wings on one side being differently spaced from those on other side, the difference between wings corresponding to the size of container at said station.

Adhesive-Strip Server, T. R. Gautier and R. W. Hoitt (to Nashua Gummed & Coated Paper Co., Nashua, N. H.). U. S. 2,134,996, Jan. 27. In a tape dispenser, a housing including means to support a tape supply, shear means in the housing, together with feed and guide means to advance tape beyond shear means, and equipped with tank for supplying moistening fluid.

Device for Transferring Fluids, J. W. Campbell (to Bottle Brownie Corp., Long Beach, N. Y.). U. S. 2,135,033, Jan. 27. An accessory adapted to act as a valve in a low-pressure system.

Brush-Scraping Attachment for Cans, R. O. Ferguson (one half to Bristol Steel & Iron Works, Inc., Bristol, Va.-Tenn.). U. S. 2,435,036, Jan. 27. In a paint can having a cylindrical wall, a crown permanently attached to the wall and a circular groove in crown, can having a tray, said tray having a circular flange which fits into groove of can.

Packaged Sundae, E. T. Moser, Hartford, Conn. U. S. 2,435,-091, Jan. 27. The method of preparing a packaged sundae which comprises partially filling a dish having a permanently closed bottom and a tight-fitting removable cover with a partially congealed ice cream mixture, pouring over the mixture a layer of relatively heavy syrup, fitting the cover closely over the layer of syrup, inverting the dish and completing the congelation of the mixture while said container is inverted.

Container, J. A. Peterson, Los Angeles, Calif. U. S. 2,135,096, Jan. 27. A container for enclosing chemicals detrimental to insects injurious to clothing and adapted to be inserted therebetween; container comprises an elongated cylindrical tube with open ends and a plurality of ribs extending lengthwise, portions of tube between ribs being perforated for escape of vapors from the chemicals within the container.

Capping Machine, J. W. Cameron (to Boyle-Midway, Inc., Chicago, Ill.). U. S. 2,135,127, Jan. 27. In a capping machine, a horizontally movable conveyor for supporting containers, each container having a threaded neck projecting upwardly from the body, neck being adapted to have a threaded cap spun thereover; a cap chute extends downwardly toward conveyor to become placed on uncapped container, and means for spinning cap over neck of container.

Hand Device for Attaching Gummed Labels, M. Castel, Freeport, N. Y. U. S. 2,135,129, Jan. 27. An applier for attaching gummed labels to moistened flat surfaces of containers composed of a magazine adapted to hold a stack of gummed labels and having an exit opening in top, equipped with plunger to push stack upward toward opening.

Collapsible Shipping and Display Carton, L. W. Franch (to Independent Paper Box Co., Los Angeles, Calif.). U. S. 2, 135, 135, Jan. 27. A shipping and display carton which constitutes a top wall section with side walls oppositely connected to same, one side wall extending outwardly and other lying adjacent the top wall, with a bottom wall connecting both sides; said carton provided with tuck-in flaps which hold carton in open position and fold away when collapsed.

Paper Bottle, F. D. Palmer (to F. D. Palmer, Inc., Chicago, Ill.). U. S. 2,435,155, Jan. 27. A paper bottle embodying a plurality of side walls and top and bottom walls, said top wall comprising at least a pair of flaps which extend from the upper ends of a pair of side walls into mutually lapping, adhesively united, face-to-face relationship, the top wall having a dispensing opening adapted to be closed by a plug.

Article-Dispensing Device, W. S. Connell, P. F. Boettcher and C. M. Holmen (to The Bastian-Blessing Co., Chicago, Ill.). U. S. 2,435,177, Jan. 27. In an article-dispensing apparatus, slideways for supporting bottles therein and having an effective horizontal dimension less than that of the bottle to dispose the bottles one above the other in an inclined position, and a supporting structure for holding the bottlem bottle in a position of greater incline from which the bottle will slide lengthwise under its own weight when free to do so and a releasable stop for preventing the bottlem bottle sliding lengthwise.

Marking Ink, B. L. Kline (to The Western Union Telegraph Co., New York, N. Y.). U. S. 2,435,222, Feb. 3. A fluid marking ink consisting substantially entirely of glyceryl mono-ricinoleate and a dye dissolved in partial ester.

Collapsible Wall-Type Container, C. A. Tome, Wilmington, Del. U. S. 2,435,251, Feb. 3. A container comprising a flexible metal tube having an integral, comparatively rigid head with screw-threaded nozzle, cap for nozzle made of inert non-metallic material, pellicle constituting a liner for nozzle, cap having a conical means to press liner against inside of nozzle and having screw-threaded wall adapted to encircle and strengthen nozzle.

Method of Affixing Labels, Wraps, Etc., L. Cahn (to Consolidated Lithographing Corp., Brooklyn, N. Y.). U. S. 2,435,268, Feb. 3. The method of heat sealing a label carrying heat-softenable material to the surface of an object by directing a flame against surface and thereby heating to a temperature of the softening point of the adhesive, and applying label to heated surface.

Hinge Construction in Molded Receptacles, P. J. Graham (to Trig Corp., Worcester, Mass.). U. S. 2,435,272, Feb. 3. A receptacle comprising container and cover formed of molded plastic material, one of molded parts being shaped to form a bearing surface, the other part having an integrally molded knuckle fitting against the bearing surface.

Carton, S. Lighter, Milwaukee, Wis. U. S. 2,435,283, Feb. 3. A carton formed of a single blank with bottom and top panel, one of which is provided with side and end walls foldably connected to panel and being disposable either perpendicular to or flatly collapsed into the plane of panel; adjacent end edges of side and end walls being foldably interconnected by a set of three approximately triangular corner sections, one of which is foldably connected to one side, one to other side and the third to second mentioned, forming a three-ply triangular formation engagement with one wall, and equipped with tongues and slots to hold all walls.

Machine for Making Paper Cups, L. M. Harvey, LaCanada. Calif. U. S. 2,435,308, Feb. 3. In a die mechanism, a pair of die parts moved toward each other to form a cup, a pair of sleeves for forming a bead on the cup, one sleeve being shiftably related to each die part, and friction means normally resisting movement of one sleeve relative to its related die part.

Mechanism for Blanking Material for Cups or the Like, L. M. Harvey, LaCanada, Calif. U. S. 2,435,309, Feb. 3. A mechanism with crankshaft, roller for feeding a strip of material horizontally above the shaft, means operated by the throw of the crankshaft for intermittently operating the roller, a die operable to cut blanks from the strip material and means operated by the shaft for actuating the die while roller is at rest.

Package Construction, E. W. Ingram, Sr. (to White Castle System, Inc., Columbus, Ohio). U. S. 2,435,355, Feb. 3. A package comprising a pair of duplicative box sections formed from a single blank of material folded to comprise front, back and side panels, at least one of the latter being formed at one end of each box section with a closure flap, opposite end of each box being open and devoid of closure elements.

Corn-Popping and Dispensing Apparatus, E. E. Zideck. Detroit, Mich. (one-half assigned to J. Hagler, Ortonville, Mich.). U. S. 2,435,378, Feb. 3. Popcorn-dispensing apparatus including an inclined popping chamber having open upper end, hopper for receiving material from said end, heating element, hot-fats holder with means for transmitting heat from heating element to popping chamber and means for measured quantities of unpopped corn into popping chamber and means for conveying popped corn to open end of popping chamber for delivery into hopper.

Container-Closing Method and Apparatus, J. C. Lang (to Bocjl Corp., Pittsburgh, Pa.). U. S. 2,435,397, Feb. 3. The



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U.S. Patents Digest

method of closing a carton which comprises pinching together a corner between two intersecting initially disconnected perpendicular surfaces into parallelism and fastening means therethrough.

Method and Apparatus for Closing Cartons, J. C. Lang (to Bocjl Corp., Pittsburgh, Pa.). U. S. 2,435,398, Feb. 3. Apparatus for setting fasteners comprising a pair of opposed jaw members adapted to engage and squeeze intersecting portions of the object to be fastened into a gather and means for shaping a fastener around and through said gather.

Multiple-Compartment Vending Machine, W. D. Young and W. A. Harris, Greenville, S. C. U. S. 2,435,526, Feb. 3. In a vending machine, a pair of side-by-side compartments for holding a plurality of articles to be vended, machine having a delivery opening, oscillatable means having upper and lower radially projecting supports for supporting the articles against downward movement in the compartments and equipped with releasable locking means for preventing movement of oscillatable means under weight of article supported.

Bag-Feeding Apparatus (to Virginia-Carolina Chemical Corp., Richmond, Va.). U. S. 2,435,532, Feb. 3. Apparatus for picking up and transporting a single layer of fabric from the top of a pile of layers of fabric comprising an upwardly extending arm pivoted at a point remote from its upper end and means for pick up and release of layers of fabric.

Waterproof Bag, W. J. Geimer (to Bemis Bro. Bag Co., Minneapolis, Minn.). U. S. 2,435,743, Feb. 10. A bag structure comprising an outer flexible walled supporting member having an inner independently formed liner therein constructed of a suitable non-porous waterproof material and a web of porous sheet material bent upon itself, inserted into the liner and extending substantially the height or length of the liner.

Method and Apparatus for Sealing Containers, C. H. Larson (to Adlake Co., a corporation of Illinois). U. S. 2,435,747, Feb. 10. A method of fabricating a hollow metal device including completing the device with a small port through the metal wall, placing a headed plug in port with stem extending inward in a non-sealing manner, enveloping device with plug in place in a gaseous environment, exerting pressure on head and simultaneously heating head to weld head to the device, thereby to seal the device while in this environment.

Tape-Dispensing Apparatus, A. L. Quinlan (to Western Electric Co., Inc.). U. S. 2,435,795, Feb. 10. In a dispensing apparatus for pressure-adhesive tape, means for rotatably supporting a supply of tape, rotatable toothed tape-serving drum positioned to receive the adhesive side of the tape on the projecting surfaces of its teeth, means for imparting intermittent rotation to said tapeserving drum and a knife rotatable on an axis at right angles to rotation of serving drum for cutting tape adhered to teeth.

Fibre-Reinforced Collapsible Container, P. Zalkind, New York, N. Y. U. S. 2,435,917, Feb. 10. A drawer front comprising a panel having an exterior face; a bottom wall connected to panel and side-wall members connected thereto, at least one tongue cut out of panel adjacent bottom wall and each of side walls; tongues being connected to walls and folded through 180 deg. into the plane of panel and extending beyond the edges, a facing sheet secured to panels and tongues.

Device for and Method of Using Adhesive Tape, G. H. Fritzinger, West Orange, N. J. U. S. Re: 22,972, Feb. 10. The method of pulling a length of tape against a resisting force, which comprises holding tape through adhesive contact of a rigid surface therewith, pulling tape by moving surface in direction opposite to that of force, with the surface being substantially 180 deg. or less from the length of tape extending from surface.

Printing Ink, H. J. Wolfe and W. W. Greubel (to American Can Co., New York, N. Y.). U. S. 2,435,992, Feb. 17. A quickdrying printing-ink composition for application to web material used in the manufacture of containers, composed of a vehicle of ethyl and nitrocellulose with 2-ethylhexyl alcohol as a solvent and wetting agents.

Liquidproof Lined Carton and Blank for Forming the Same, H. F. Waters, New York, N. Y. U. S. 2,436,061, Feb. 17. A carton having secured thereto an inner flexible container, adapted to be shipped flat, and so cut that when opened into position the inner container will be opened into filling position and the side walls positioned in a plane substantially at right angles to front and rear walls for insertion of tabs into slits of blank.

Fibreboard Cream-Separating Milk Container, C. E. Deardorff (to C. E. Deardorff, Inc., a corporation of California). U. S. 2,436,140, Feb. 17. In combination with a carton having four sides and top with an outlet opening therein, transverse partitions dividing the carton into two compartments, the partition having three edges contacting three of carton sides and a fourth edge V-shaped with the apex of the V spaced from the fourth side to provide for a fluid passage between compartments.

Card-Cutting Machine, K. J. Braun (to Control Instrument Co., Inc., Brooklyn, N. Y.). U. S. 2,436,192, Feb. 17. In a cutting machine for severing predetermined lengths from a continuous strip of material, a cutting mechanism, means to feed strip continuously toward mechanism, means to operate mechanism to stop the continuous feed periodically and to sever strip while it is stopped; control means for holding excess of material in strip between feeding means and cutting mechanism while equipment is stopped.

Lid Opener for Containers, J. W. Bristow, Birmingham, England. U. S. 2,436,193, Feb. 17. Hollow container comprising a cylindrical body portion having an open end, an inwardly projecting flange formed on body portion at open end, a circular-flanged lid adapted to fit into open end to make tight contact with flange.

Adhesive-Cement Composition, A. M. Neal and J. J. Verbanc (to E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.). U. S. 2,436,222, Feb. 17. An adhesive-cement composition comprising an elastoprene, an organic diisocyanate and a non-reactive volatile organic solvent.

Product-Vending Machine, E. J. Newcomer (to City Vending Equipment Corp., Maspeth, Long Island, N. Y.). U. S. 2,436,-223, Feb. 17. In a vending machine the combination, with a storage feed belt and its containers, a delivery belt and its containers, a motor for driving the storage feed belt and an operating circuit for the motor including a control switch, of a pivotally mounted replacement yoke co-acting with the containers on the delivery belt for opening the control switch and automatic means operative in the absence of contact of the containers from said yoke for closing the control switch.

Bottle Crate, A. Taurman, Birmingham, Ala. U. S. 2,436,236, Feb. 17. A bottle crate comprising a metal top having downwardly flanged openings therein for the reception of bottles, a metal bottom spaced from the top and bottle separators comprising continuous metal straps each bent in a plurality of U shapes, each U forming a separator.

Method of Preparing Casein Adhesives, S. M. Weisberg and E. G. Stimpson (to National Dairy Research Laboratories, Inc., New York, N. Y.). U. S. 2,436,239, Feb. 17. A method of preparing adhesive comprising heating and agitating a mixture of casein and water to about 145 deg. F. in the presence of an alkaline compound to produce a homogeneous dispersion containing at least 30% casein, cooling dispersion and mixing with a proteolytic enzyme which is active in alkaline or neutral solution.

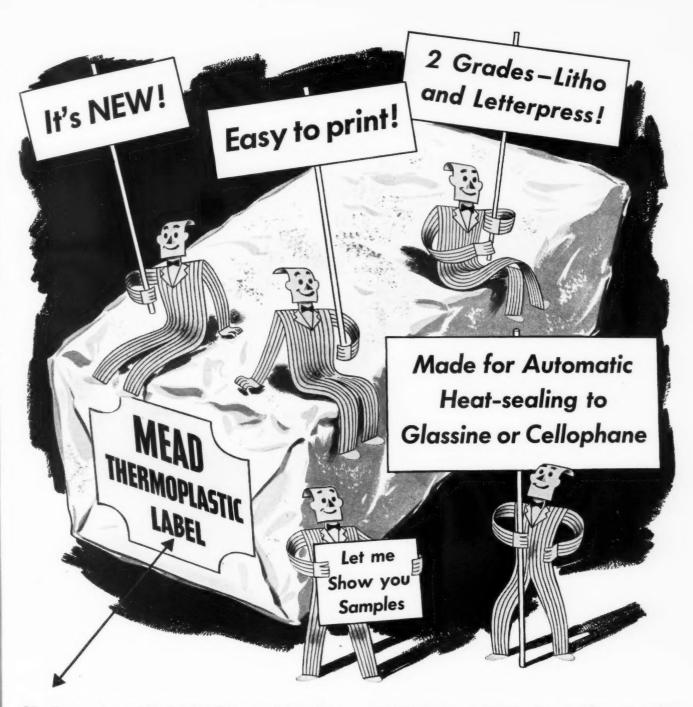
Bottle Cap, V. Guarnaschelli, Corona, N. Y. U. S. 2,436,297. Feb. 17. A bottle cap for a bottle having an annular bead at its mouth which is a substantially disk-like member adapted to cover mouth of bottle, cap having a depending peripheral flange extending from the peripheral edge, said flange having a cut-out at front of cap of a size adapted to receive said bead.

Collapsible Paperboard Counter Basket, J. V. Horr (to Einson-Freeman Co., Inc., Long Island City, N. Y.). U. S. 2,-436,300, Feb. 17. A collapsible paperboard counter basket with peripheral wall, hingedly connected areas including a pair of opposed areas, a bottom wall comprising a pair of interlocked panels hinged to opposed areas, respectively, and a secondary collapsible structure articulated to panels and controlled thereby.

Closure Device and Method of Making Same, I. L. Lesavoy, Allentown, Pa. U. S. 2,436,312, Feb. 17. A circular blank for forming into a skirted type of cap for containers provided at spaced points about its periphery with radially extending slits, alternate peripheral portions between slits being folded back to overlie contiguous portions of the blank, presenting a serrated periphery; these are coated with a self-cohesive substance, whereby blanks may be stacked without adhering to underside of overlying blanks.

Explosive Sealing Heads for Containers, C. J. McDowell (to Dominion Merchants Co., Ltd., St. Laurent, Quebec, Canada). U. S. 2,436,364, Feb. 17. A sealing-plug assembly comprising a sealing plug including a flange-like marginal portion and a central stem portion projecting above flange-like marginal portion; stem is provided with outer circumferential groove and ring fitted on upwardly projecting part of stem portion covering groove, said groove and ring conjointly defining an explosion chamber containing an explosive charge and means for igniting said charge.

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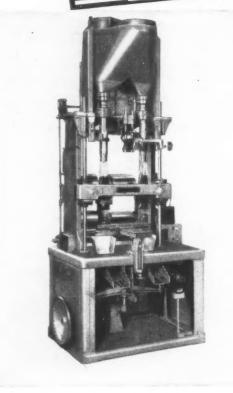
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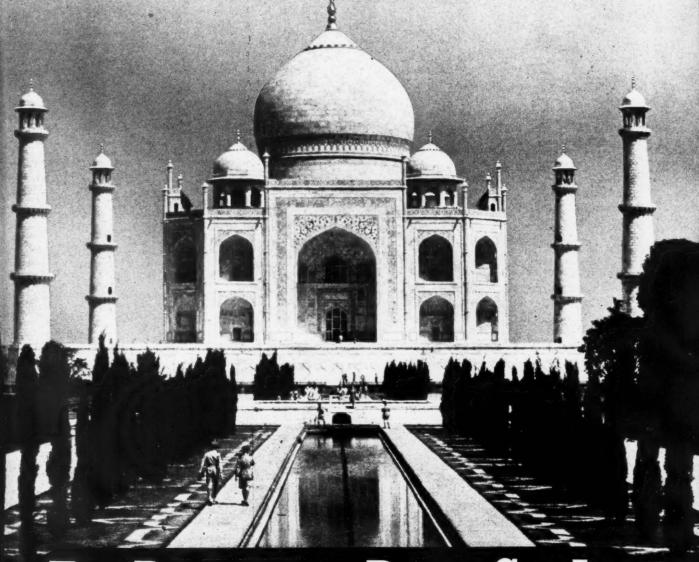


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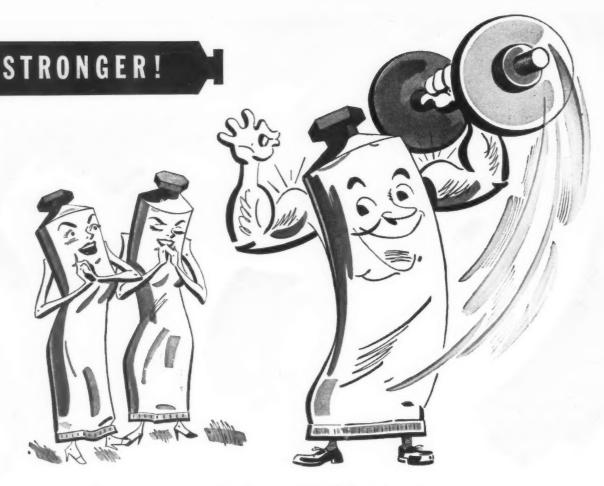




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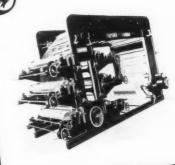
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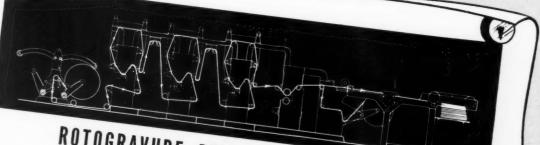
Both Opti-Check machines . . . the Model R, for rotary presses and the Model F, for flat-bed presses, are the immediate answer to cutting color plate registration time. This new revolutionary machine pre-registers plates before they go on the press allowing press to run on other jobs while plates are being registered.





ANILINE AND LETTERPRESS PRINTING

For the finest in multicolor aniline or letterpress printing, investigate the new Cottrell-Heinrich Converter Model J press. It embodies improvements designed to produce better printing quality at higher speeds with greater printing economy.



ROTOGRAVURE PRINTING

Speed, quality, rock-bottom economy—that's the new outstanding Rocket. Designed by men who know press design to meet the urgent need of printers and converts for a gravure press capable of better printing at lower cost. Readily paper widths. Priced to meet every printer's pocketbook.

Write us today for any further information on any or all of these machines.

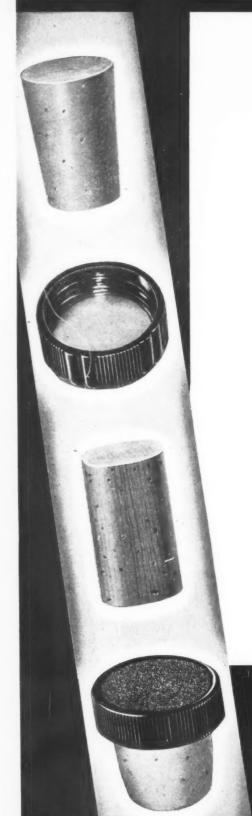
H. H. HEINRICH

INCORPORATED



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SEE US AT THE PACKAGING SHOW
BOOTH 501

GOOD PACKAGING BEGINS WITH GOOD SEALING



GOOD SEALING BEGINS WITH

There is nothing like cork to seal the freshness and purity of glass-packaged drugs, cosmetics, foods and other products.

The success of the package—and the product—depends upon the reliability of the cork seal. Mundet Cork Closures are made from prime "pedigreed" cork, selected by Mundet representatives in the Mediterranean regions where the world's finest commercial cork is grown.

Mundet Cork Closures are made in types and styles for every sealing purpose. Get in touch with us now for practical suggestions on modern sealing with cork. Mundet Cork Corporation, Closure Division, 7101 Tonnelle Avenue, North Bergen, N. J.

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DALLAS 1
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14401 Prairie Street
HOUSTON 1
Commerce and Palmer Streets

JACKSONVILLE 6, FLA. 800 E. Bey Street KANSAS CITY 7, MO. 1428 St. Louis Avenue

SAN FRANCISCO 7
440 Brannan Street
and
J. C. MILLETT CO.
118-32 Sacramento St.

6116 Walker Avenue

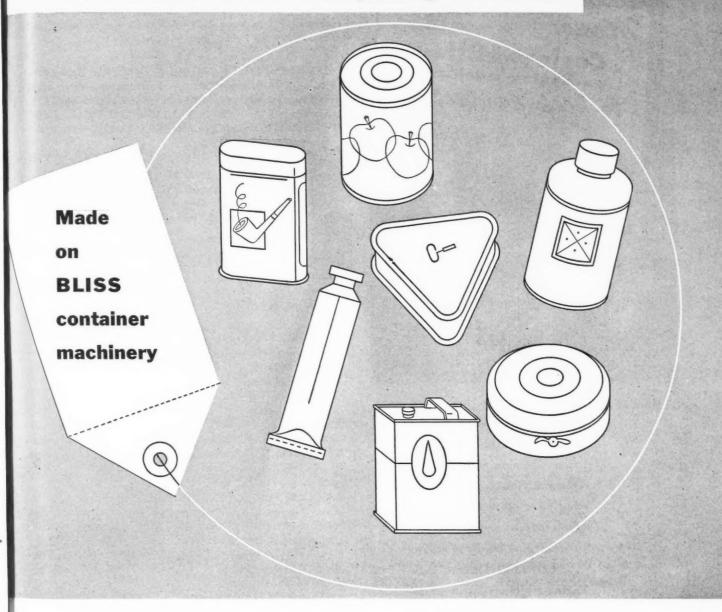
LOUISVILLE 10 1416 Arbegust Street NEW ORLEANS 16 315-325 N. Front Street PHILADELPHIA 39 856 N. 48th Street

ST. LOUIS 4 2415 South Third Street

In Canada: Mundet Cork & Insulation, Ltd., 35 Booth Avenue, Toronto

MUNICLOSURES

The unseen label on the package is BLISS



Food can or collapsible tube...candy box or cosmetic package ... tobacco tin or paint can—if all the infinite shapes and types of metal containers and caps were labeled to identify the machines on which they were produced, "Bliss-Built" would be an often recognized stamp of quality on the package.

And it would identify the world's largest independent manufacturer of can and container machinery... the pioneer of many of the engineering advances in our modern high speed and efficient packaging methods...for over 90 years.

Bliss' all-inclusive range of equipment parallels the wide variety of sizes, shapes and production volume requirements from the smallest tin to the largest drum. Your container-making needs are among them—for a single machine or a complete production line.

Tell us your container-making problem. Our engineers will be glad to help work it out. Include the information in the following check-list. It will help speed back our recommendation.

E. W. BLISS COMPANY

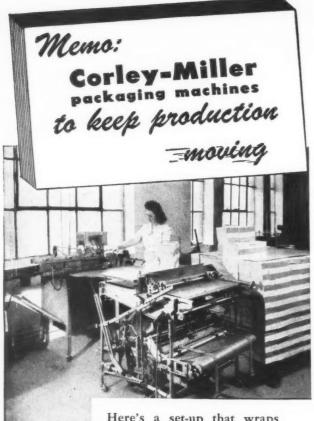
How to send us your INQUIRY

The more we know about your individual requirements, the better able we will be to help you meet them. The following information is requested: 1. Dimensioned drawings • 2. Hourly and yearly production required • 3. Intended contents of container 4. Floor space • 5. Power characteristics • 6. Gas supply available where soldered cans involved.

BLISS produces machinery for making the following cans and containers:

Sanitary round cans . . . 1-5M per day; 5-gallon square . . . 1^{1} / $\!_{\infty}$ M per 8 hour day, 5-8M per day, 15-20M per day; Screw and crown caps; Square and oval cans (fish); Dry package containers; Flit cans; Paint cans; Milk cans; Butter cans; 5-gallon Kit line; Pails and Buckets; Special and irregular shapes; Drums and Barrels; Individual sheet metal working machines.

Container Machinery Division Englewood, New Jersey



Here's a set-up that wraps many sizes of pads and reams of paper for Rockwell-Barnes Co., Chicago, with just one operator feeding ... End-sealing saves on wrapping paper (roll fed) ... No gummed tape cold glue used for sealing ... CORLEY-MILLER packaging machines and combinations do a hundred different

jobs . . . What's your need?

Send for

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information

MACHINES FOR

□ Wrapping□ Bag-Making

□ Bag-Making□ Bag or Carton Filling

☐ Bag Sealing

☐ Sheeting-Gluing☐ Heat Sealing (Hot Plates & Hand Irons)

Sandwich-Making

and see us at the Packaging Exposition ... Booth 115



MANUFACTURERS OF CORLEY AND CORLEY-MILLER PACKAGING MACHINES 14 South Clinton St., Chicago 6, Illinois

Ready for Packaging Show

(Continued from page 117) of drawers, heart boxes, etc. Personnel: Dan Fox. Hotel: Statler.

ALUMINUM CO. OF AMERICA, Booth 119. Heat-sealed aluminum foil-wrapped frozen food cartons, collapsible tubes, foil-encased products, assorted lacquered and printed foils. Personnel: T. A. Torrence, T. M. Hill, A. C. Bakken and R. V. Elliott; Norman Olsen and D. O. Rowley, representing Aluminum Seal Co.

AMERICAN CAN CO., Booth 403. Packaging developments of past 40 years. Personnel: W. C. Stolk, G. W. Reese, F. G. Jewett, J. Whitney King, Jr., W. K. Cabot, F. J. Dowling, F. I. Truxal, F. G. Richards, W. V. Lyons. Hotel: Statler.

AMSCO PACKAGING MACHINERY, INC., Booth 115. Rotary bag sealer, stainless steel conveyor. Personnel: E. E. Messmer, John Sylvester, F. Cyfra, G. G. Cignoli, J. Kelly, E. Watson, S. Watson. Hotel: Auditorium.

ARABOL MFG. CO., Booth 1. Adhesives. Personnel: Edward E. Diedrichs, Arthur J. Leary, Roger Bailey, Roger Muther, Denis Rollin, Edward Altman, William Knobloch, Richard Walraven, Francis McCourt, L. Eickstedt. Hotel: Cleveland.

ARMSTRONG CORK CO., *Booth 32*. Glass containers and metal, molded and cork closures. *Personnel*: R. A. Horning, V. A. Game, H. C. Seaman, R. L. Acklin, S. W. Menefee, W. E. Cash. *Hotel*: Cleveland.

ASSOCIATED COOPERAGE INDUSTRIES OF AMERICA. Motion pictures showing use of barrels, kegs, etc. Samples of wooden barrels and kegs. *Personnel:* F. P. Hankerson, Harry Krause, Ben Klausner, Jake Klausner, Nicholas Ryer, James Little, A. C. Schultz, Jacob Mattlin. *Hotel:* Cleveland.

BAGPRINT MACHINERY CORP., Booth 630. Bag machines with three-color printing press; bag machine with electric eye. Personnel: Walter S. Ryan, Clifford A. Laury, Cyril E. Epler. Hotel: Statler.

BAIRD & CO., C. D., *Booth 502A*. Floor cases and counter displays. *Personnel:* C. D. Baird, H. S. Berry, B. J. Bjornstad, S. A. Anthony. *Hotel:* Auditorium.

BARRETT-CRAVENS CO. Tractor ox, hand lift trucks, skids, box tops, portable elevators, storage racks. *Personnel*: O. M. Lund, H. M. Donnelly, J. L. Fremgen, A. M. Barrett, H. C. Morrison. *Hotel*: Hollenden.

BEMIS BRO. BAG CO., *Booth 216-B.* Mobile, colored display on how shipping bags are used. *Personnel:* A. B. Merriam, N. J. Leake, R. C. Thomas, A. H. Grace, C. L. Ferguson, R. B. LeRoy, M. C. Barnes, W. D. Stohlman, G. E. Murphy. *Hotel:* Cleveland.

BETTER PACKAGES, INC., Booth 306. Dispensing machines for types of package-sealing tapes.



Our plants are placed in the heart of two nations' largest production areas.

The Importance of SERVICE

Cleveland Container customers know that thru the years .. and today . . there are many advantages to be obtained from this organization. Large production capacity so located that our field staff can work closely with each customer.

Cleveland Container Modern Packaging gives the manufacturer many advantages.

Packing and shipping requirements predetermined, met and often exceeded.

Unique, eye-compelling appearance.

Quality combined with low production

Construction in materials that meets individual needs.

Experienced counsel in new creative ideas to obtain packages with personality and proven performance.

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Prompt attention given to each inquiry.



Plastic and Combination Paper and Plastic Items
PRODUCTION PLANTS also at Pyrmeth, Wisc., Ogdensburg, N.Y., Chicago, III, et printit, Mich., Jamesburg, N.J.
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CANADIAN PLANT: The Cleveland Centainer Canada, Ltd., Prescott, Ontario



APRIL 1948



BURT CO., F. N., INC., *Booths 626–7*. Set-up paper boxes, folding cartons, acetate-sheeting packages, special finishes for paper. *Personnel:* T. S. Duncanson, W. C. Milsom, O. W. Honsberger, G. Diebold, A. W. Buchanan, Mrs. L. S. Hagner, J. Rau, E. A. Brewer, J. S. Foster, A. C. Foster. *Hotel:* Cleveland.

CARRY-PACK CO., LTD., Booth 616. Package carriers. Personnel: Odell Allaun, A. C. Jacobs, A. C. Smith. Hotel: Statler.

CARTER ENGINEERING CO., *Booth 310-B*. High-speed envelope filling and sealing machine. *Personnel:* C. F. Carter, J. A. Miller. *Hotel:* Carter.

CELANESE CORP. OF AMERICA, Booth 101. Examples of processed food packaging, pre-packaged fresh produce, heat-sealing acetate, boxes, cartons, folding and set-up boxes with laminated wraps. Hotel: Carter.

CELLO-MASTERS, INC., Booth 505-B. Daily changes in exhibit will feature packages from varied industries. Personnel: John Cozza, Norman Lazarus, Joseph N. Lazarus, Murray Picard. Hotel: Hollenden.

CELON CO., *Booth 641*. Food, wine, cosmetic, drug packages completely labeled and sealed with cellulose seals. *Personnel:* L. J. Trecek. *Hotel:* Auditorium.

CENTRAL STATES PAPER & BAG CO., Booth 117-B. Rigid transparent plastic showboxes, special paper bags. Personnel: A. A. Abramson, H. Velkoff, H. L. Abramson, B. Berkenfield, S. L. Abramson. Hotel: Hollenden.

CHAMPLAIN CO., INC., *Booth 218*. Rotogravure printing equipment, packaging materials printed by rotogravure. *Personnel:* Arthur F. Goat, Leonard J. Remington, Howard J. Conroy, A. T. Kuehn, J. Emmett Cade.

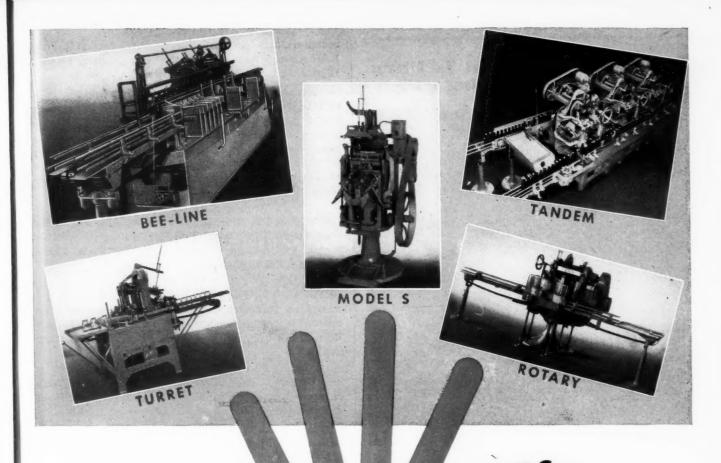
CHISHOLM RYDER CO. OF PENNSYLVANIA, *Booth* 715. Adjustable labeling machine. *Personnel:* Charles M. Hesson, J. J. Hesson, E. J. Abendschein. *Hotel:* Statler.

COLEMAN-PETTERSEN CORP., Booth 702. Merchandising displays using sheet metal, wire, wood and plastics for cans, bottles, dishes, etc. Personnel: George H. Page, John F. Coleman, Raymond M. Frost, W. M. Folberth, William H. Coleman.

CONSOLIDATED LITHOGRAPHING CORP., Booth 301-B. Lithographed window, counter, floor, wall, outdoor and interior displays, package labels. Personnel: Ralph D. Cole, Henry A. Topping, Charles Scheid, Sidney P. Voice, Henry A. Topping, Jr. Hotel: Statler.

CONSOLIDATED PACKAGING MACHINERY CORP., Booth 27. Personnel: E. G. Kuhn, E. L. Kuhn, R. L. Rogers, L. F. Maurer, J. E. Baum, B. C. York, W. F. Kruse. Hotel: Statler.

CONTAINER CORP. OF AMERICA, Booth 109. Display of folding cartons, corrugated and solid fibreboard shipping



FIVE KINDS OF LABELERS WHICH IS THE BEST WHICH IS THE BEST IN THE WORLD FOR YOU?

BEE-LINE—the high production, full automatic WORLD Labeler that is used for clean, precise, quality application of hundreds of famous labels in the food, condiment, wines and spirits, pharmaceutical and other industries. Applies front labels, front and back labels, and neck labels if desired, to round, square, oval, flat or panel containers. Production up to two a second.

TURRET — for automatic, continuous, low cost labeling that is worthy of the finest products packed in glass. Handles round or fluted containers from 2 to 4 ins. diameter, 3 to 13 ins. high. Applies body labels and, when desired, neck labels, all

around neck wraps or foil. Production range from 60 to 140 per minute.

TANDEM — for efficient high production labeling of brewery and soft drink bottles or round jars. Designed to meet expanding production needs with maximum economy at any desired rate from 75 to 300 bottles per minute.

ROTARY — for dependable low cost label application to round bottles or jars of all types and sizes from 4 oz. or less to 32 oz. or more. Applies body labels, body and neck labels, or body labels, neck labels and foil in one operation up to 85 per minute.

MODEL 5 — the Semi-Automatic Labeler for applying body labels, all-around labels, neck labels and foil — any or all — to any size container from tiny vials to gallon jugs. Ideal for those with a variety of label or container sizes and shapes. Designed for rapid change-overs and fast operation even by unskilled operators.

WRITE FOR BULLETINS containing complete descriptions

*See the World
BEE-LINE in operation at
BOOTH 106
Packaging Show

"YOU GET THE BEST LABELERS IN THE WORLD"

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

WORCESTER, MASSACHUSETTS

New York Philadelphia Pittsburgh Chicago San Francisco Los Angeles I Louisville Salt Lake City El Paso Seattle Portland Phoenix London Mont Toronto Winnipeg Newfoundland Vancouver Mexico City Sydney, Austra

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Counting by Weight Is Ultra Modern Packaging . . .



Counting millions of cartickets on an EXACT WEIGHT Shadograph. Columbus & Southern Ohio Electric Co., Columbus, Ohio.

do it the Exact Weight Way . . .

Counting and packaging tickets, coupons, cards, circulars, bottle tops, tacks and countless other items running into millions of individual units is an unwarranted expense when done by hand. The time element and present day labor costs have long since forced manufacturers, printers car and bus companies and air lines to seek faster, cheaper methods. Today EXACT WEIGHT Shadograph scales perform these tasks at a fraction of former costs, in a tenth of the time and to accuracy of less than one half of one percent error. Printers now count and package tremendous runs of circulars in a matter of hours . . . dairies count milk bottle tops . . . street car and bus companies count millions of tickets . . . one tobacco company uses sixteen units for counting premium coupons, all by weighing. This is ultra modern packaging that saves time and money. If you have a similar operation write for full details.

Sales & Service from Coast to Coast

Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY

222 W. Fifth Ave., Columbus 12, Ohio 783 Yonge Street, Toronto 5, Canada

containers, fibre cans, set-up boxes. *Personnel:* B. R. Frost, R. H. Greenwell, C. M. Shanahan, W. I. Sharp, Freeman Higgins, D. E. McDonald, M. Gaukerud.

CONTAINER EQUIPMENT CORP., Booth 215-A. New type adjustable carton-sealing machine complete with automatic carton opener, product-inserting conveyor and automatic glue-pump system. Personnel: Fred W. Kucklinsky, E. M. Kluckinsky, William E. Haberland, Dalton Szelle, M. Derrico, Robert Woelfer, H. W. Clowe, Roy F. Heller. Hotel: Statler.

CROWN CORK SPECIALTY CORP. Closures, closure liners fittings. *Personnel:* Don Hill, William R. Fox, Jack Jordan, Ves Hoffman, George Schaffer, Ted Costa, Charles Lawrence. *Hotel:* Cleveland.

CRYSTAL TUBE CORP., Booth 604. Flexible and rigid transparent packaging, printed cellophane and acetate containers, coated materials. Personnel: Harold Goldring, Reynold Goodman, Eileen Clifford. Hotel: Hollenden and Statler.

DERBY SEALERS, INC., *Booth 628*. Automatic gum-tape dispensing machines, label moistening machines. *Personnel:* A. P. Krueger, W. S. Shee, H. C. Zuengler.

DIAGRAPH-BRADLEY INDUSTRIES, INC., Booths 205–6. Demonstration of stencil-cutting machines, stenciling inks, markers and brushes, stencil board, label gummers and assorters. Personnel: John G. Burton, O. K. Patterson. Hotel: Cleveland.

DIFFENBAUGH CO., P. H., Booth 717. Cellophane bagmaking machine. Personnel: P. H. Diffenbaugh, Curtis R. Atkins, I. Diffenbaugh. Hotel: Statler.

DOBECKMUN CO., THE, Booth 103. Plain and printed transparent containers, converted acetate, polyethylene, cellophane, aluminum foil plain and laminated. Personnel: T. F. Dolan, E. P. Whitley, J. M. Cowan, R. C. Betts, K. E. Prindle, R. M. Seigle, R. S. Jones, T. C. Lindsay, T. E. Bruffy, R. R. Greene, R. Y. Taggart, J. M. Deegan, H. Hershberger, L. L. Hockersmith,

DOUGHBOY INDUSTRIES, INC., Booth 503-A. New heat-sealing machine, seamer for heat seaming plastic film. Personnel: Jules L. Steele, E. Riley Livingston, Dr. C. R. Arnold, Niles Williams.

DU PONT DE NEMOURS & CO., E. I., INC., CELLO-PHANE DIV. *Booth 302*. Visual presentation of survey results on impulse buying in groceries, showing importance of packaging at point of sale. *Personnel:* C. F. Broun, J. E. Dean, W. J. Harte, E. C. Lake, L. B. Steele, W. G. Hunter, D. E. Drew, R. R. Smith, E. A. Wight, B. C. Robbins, R. M. MacDonald, T. W. Holland C. E. Fogg. *Hotel:* Cleveland.

EASTMAN KODAK CO., *Booth 111*. Display of cellulose ester sheet, demonstration showing the operation of electronically heat sealing the corner stays on transparent containers. *Personnel:* L. L. McGrady, A. B. Corey, H. Lloyd, Paul Braman, C. R. Lee, Vernon Howe, Lyle Mills, J. Gruntler,



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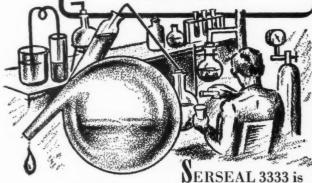
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a hydro-carbon compound, carefully milled and controlled in fabrication. A versatile additive that is easy to handle.

SERSEAL 3333 has an excellent compatibility ratio with all mineral waxes to formulate coating, laminating and heat sealing compounds of the highest quality.

SERSEAL 3333 is the answer to problems of flexibility, controlled viscosity, moisture and moisture vapor resistance, adhesion, cold flow and heat seal. When blended with good waxes SERSEAL 3333 produces compounds of superior quality, assures positive performance and greater economy.

IMMEDIATELY AVAILABLE
IN 35 POUND PAPER BULKANS,
30 GALLON 28 GAUGE DRUMS,
CARLOADS OR LESS

Samples upon request

MERCE OIL CORPORATION

WARREN, PENNSYLVANIA

that "New Look"

Give

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tell us
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Makes Better
RAYON VELOUR
AND
COTTON SUEDE

Papers"

Packages and Displays!

Ideal Uses

Display Window Trim Window Floors **Decorations** Lamp Shades **Fancy Boxes Folding Cartons** Setup Boxes **Jewelry Boxes Cosmetic Boxes Candy Boxes** Liquor Boxes **National Advertisers** Department Stores Chain Stores and hundreds of other effective **Applications**

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DISTRIBUTORS
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PAPER MERCHANTS

from
Coast to Coast

Send for Samples

Flexible Availability for Every Purpose!

RAYON VELOUR PAPER

40" Boxweight 49" Lined Folding Board 53½" Seamless

COTTON SUEDE PAPER

27" Boxweight 49" Lined Folding Board 54" Boxweight

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Prompt Delivery From Adequate Stock

Competitively Priced

and Name of Your Nearest Supplier

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R. Caire, C. D. Snead, M. F. Tucker, E. M. Drummond, S. Osman. *Hotel:* Cleveland.

ECONOMIC MACHINERY CO., Booth 106. Bottle and glass-container labeling machine. Personnel: Andrew J. B. Adams, Howard R. Stewart, Sidney T. Carter, A. J. Adams, R. D. Adams, H. V. Thalin, E. V. Novak, H. N. Johnson, A. O. Frykholm. Hotel: Cleveland.

EINSON-FREEMAN CO., INC., Booth 107. Exhibit of point-of-sale display material for window and counters. Personnel: N. J. Leigh, Albert Hailparn, Ben Dreyfuss, R. H. Leeds. Hotel: Hollenden.

EXACT WEIGHT SCALE CO., Booth 618. Electronically operated check-weighing machine, vibratory packaging and feeding equipment. Personnel: W. A. Scheurer, D. M. Laird, W. J. Schieser, J. F. Sullivan, W. L. Brocker, R. W. Grant. Hotel: Cleveland.

FERGUSON CO., J. L., Booth 408. Carton filling, gluing and sealing unit, top and bottom gluer, dating devise, case counter, case imprinter. Personnel: J. L. Ferguson, Sr., H. Lyle Greene, P. D. Bowley, C. A. Claus. Hotels: Statler and Auditorium.

FLOW MAGAZINE, *Booth 701. Personnel:* Irving B. Hexter, Lester P. Aurbach, Manfred Schueler, Charles Demian, Lester Oppenheim, Harold F. Behm.

FOOD INDUSTRIES, *Booth 108. Personnel:* M. A. Williamson, L. E. Christ, F. Grant, T. E. Taylor. *Hotels:* Statler and Cleveland.

FOOD MACHINERY CORP., SPRAGUE-SELLS DIV. Booth 634. Automatic packaging machine. Personnel: N. S. Sells, T. Martin, C. K. Wilson, R. T. Myers, C. E. Kerr, E. W. Hardesty, R. T. Moore, H. C. McClure, E. Tourjee, R. H. Grant. Hotel: Statler.

GAYLORD CONTAINER CORP., Booth 401. Corrugated and solid-fibre shipping cases, folding cartons, kraft bags, sacks and paper. Personnel: Ben M. Williams, Frank R. McGregor, Kent Ravenscroft, Walter C. George, Clifford D. Fallert, Robert K. Withrow, Oakleigh R. French. Hotel: Cleveland.

GENERAL BOX CO., *Booth 511*. Animated scale model of box-testing machine, wirebound boxes and crates, corrugated and cleated containers, pallets. *Personnel:* N. A. Fowler, J. F. Ferguson, G. T. Walne, Ralph Cunningham, W. G. Vance. *Hotel:* Cleveland.

GENERAL CONTAINER CORP., Booth 631. Folding cartons, set-up boxes, shipping containers and packing materials. Personnel: R. W. Agler, G. D. Robinson, G. M. Kincade, C. T. Schunk, C. M. French, W. H. Lamb, P. F. Vandervort. Hotel: Hollenden.

GENERAL MILLS, INC., Booth 33. Vacuum filler machines, carton set-up and closing machines. Personnel: A. D. Hyde, G. C. Becker, E. T. Coopat, P. E. Fischer, H. A.

The WOMAN PAYS

...and <u>smart</u> Merchandisers

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WOMEN-pay for-(buy)-34 of all goods sold in the United States at retail.

That fact doesn't influence the sales strategy of manufacturers who do not realize its significance. But this country's leading merchandising organizations capitalize on it. They conduct nationwide surveys to learn how women buy.

Those surveys show that women make ¾ of their decisions—as to what brand to buy—in the stores—at the point-of-sale—on impulse.

THERE—they react to what they SEE. There—the appearance of your product's package is a DECISIVE sales factor.

HOW TO MAKE YOUR PACKAGE SELL!

Let Ritchie help you develop (at low unit cost) a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill—to handle—to stack or display. An attractive, eye-stopping, SELLING package.

DOROTHY HART now appearing in Mark Hellinger's "THE NAKED CITY" a Universal-International Release As the motion picture industry capitalizes on good looks, keen merchandisers capitalize on the selling power of an attractive package.



W.C. Ritchie

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- * SET-UP PAPER BOXES
- * FIBRE CANS
- * TRANSPARENT PACKAGES

TRADE MARK

Underestimate

of the Package!

NEW YORK . DETROIT . LOS ANGELES . ST. LOUIS . CHARLOTTE . JACKSONVILLE . ERIE

Speed up Shipments with

STENCILING

BRADLEY'S

- . STENCIL CUTTING MACHINES
- . STENCIL OILED BOARD
- STENCIL INKS
- STENCIL BRUSHES



STENCILING YOUR
SHIPMENTS WILL
IMPROVE THEIR
APPEARANCE
AND SPEED DE-LIVERY.

We can furnish a machine to meet every requirement sizes ½" to 1¾" letters.

BRADLEY'S 5 IN 1 STENCIL INK IS INSTANT DRYING — NON-SETTLING. PROVIDES SHARP, CLEAR ADDRESSES ON CAR-TONS, CASES, ETC.



A. J. BRADLEY MFG. CO.

43rd Ave. & 9th St., L. I. City 1, N. Y.
SERVING YOU SINCE 1896

Sets get together

PACKAGING EXPOSITION
IN CLEVELAND

Booth 716



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Converters, Laminators, Printers of Papers, Films and Foils. Rohdin, W. A. Roberts, William Fischer, Al Jay, Lee Merrill, M. B. Sturdevant, D. E. Wetzel. *Hotel:* Carter.

GERRARD & CO., A. J., *Booth 15*. Demonstration of stitching machines for cartons and steel and fibre strapping for package reinforcement. *Personnel:* Henry Wenk, Clarence McCarter, Bernard C. Barnes. *Hotel:* Auditorium.

GOAT CO., THE FRED, INC., Booth 218. Demonstration of a high-speed weight checker. Personnel: Edward C. Leber, C. J. Cornell.

GOODYEAR TIRE & RUBBER CO., PLIOFILM DEPARTMENT. Booth 402. Demonstration of food, drug packaging. Personnel: C. P. Joslyn, E. E. Ellies, A. B. Clunan, F. E. Wilson, J. H. Conrad, R. W. Anderson, Robert Kilgore, J. B. Post, A. E. Grundy, William J. O'Keefe, H. E. Williamson, Thomas Strickland, William Boudy.

GOTTSCHO, ADOLPH, INC., Booth 502-B. Automatic code-dating and marking machines. Personnel: Adolph Gottscho, Ira Gottscho, A. van der Lyn, Ken Kuett.

HANKINS CONTAINER CO., Booth 219. Colored and embossed corrugated-fibreboard containers, gift boxes, single-faced white specialties. Personnel: W. L. Bapst, D. R. Bowden, P. J. Brooks, F. W. Haase, R. G. Smith, Paul Miessler, R. R. Suloff.

HARCORD MFG. CO., *Booth 708*. Various cylindrical and oval containers. *Personnel*: O. L. Coryat, J. T. Harrington, William Drambour, William Lauterette. *Hotel*: Statler.

HAYSSEN MFG. CO., *Booths* 22–3. Automatic carton-wrapping machines. *Personnel:* William A. Hayssen, F. Horwitz, Leslie Laing, George Laing. *Hotels:* Statler and Cleveland.

HAZEL-ATLAS GLASS CO., Booth 124. Glass jars, bottles, tumblers, metal caps. Exhibit featuring evolution of jar. Personnel: Frasier Smith, J. L. Hendrickson, W. H. Baird, A. L. Key. Hotel: Carter.

HEAT SEAL-IT CO., *Booths 311-12*. Heat-sealing packaging machines and a new automatic bag-sealing machine. *Personnel:* H. L. Reitzes, Charles Reitzes, I. Fixman, H. Rosenwald, C. Bower. *Hotel:* Auditorium.

HEINRICH, H. H., INC., *Booth*, 501. Rotogravure printing press. *Personnel:* H. H. Heinrich, E. L. Harley, D. H. Roemer. *Hotel:* Statler.

HIGH PRODUCTION MACHINE CO., Booth 503-B. Wrapping machine, gluing machine, boxes. Personnel: Douglas T. Neale, Harold K. Reifsnyder, William J. Haessler, Karl R. Schoettle, Roy Hahn. Hotel: Carter.

HINDE & DAUCH PAPER CO., *Booth 114*. Display of specialty packages, insulated packages, cushioning material, flexible wrapping material. New box styles. *Personnel:* J. H. Macleod, C. M. Schott, Paul Meelfeld, C. U. Harvey, W. M. Henderson, John Grunden, F. P. Andres, P. F. McGreal.

HOPE MACHINE CO., Booth 629. Filling machine. Per-



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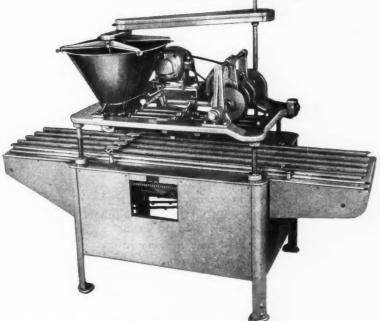
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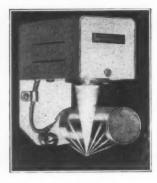


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IMPORTED DELICACIES CO., CONTAINER DIV., Booth 404-B. Decorated, lithographed and embossed metal boxes, gift containers. Personnel: Ben Greenstein, Abe Katzman, Max Rehns. Hotel: Hollenden.

INDUSTRIAL TAPE CORP., Booth 304. Cellophane, paper, cloth and acetate-fibre tapes, predetermined-length dispenser. Personnel: James E. Spencer, John H. Scherer, E. Chisholm, L. E. Barnes, R. T. Hamilton. Hotel: Hollenden.

IVERS-LEE CO., Booth 605-A. Unit packaging display, new sanitape-sealtite unit package. Personnel: L. I. Volckening, L. L. Salfisberg, E. W. Mason, Jack O'Meara, Bob Johnson, M. J. Salfisberg. Hotel: Cleveland.

JONES & CO., R. A., INC., *Booth 605*. Constant-motion bottle cartoner, high-speed carton-loading machinery. *Personnel:* W. Jones, A. E. Motch, R. T. Foreman, J. R. Wilson.

KALAMAZOO VEGETABLE PARCHMENT CO., Booth 2. Food-protection papers, printed carbon-sealing papers. Personnel: Glenn Stewart, Merle Wood, Gordon Curry, Arthur Sterenberg, Harrison Jones, Robert McElwain.

KIMBERLY-CLARK CORP., Booth 307-A. Creped wadding and its application of cushioning for surface protection and padding in interior packaging. Personnel: R. B. Sawtell, F. A. Biederman, S. L. Swenson, R. J. Piltz, F. R. Haggren, D. L. Merritt, S. R. Shellhammer, W. A. Hemming, W. A. Dunn, J. E. Kirk. Hotel: Cleveland.

KIMBLE GLASS CO., *Booth 28*. Clear glass vials, containers of all kinds. *Personnel:* E. B. Dennis, J. A. Serra, L. E. Beitler, T. F. Logan, W. H. Blecha, S. J. McGiveran, R. W. M. Ritter, W. F. Smith, J. J. Moran, R. P. Gillham, Harlan Hobbs, W. J. Souders, J. F. Greene, E. D. Bowes, T. Anderson. *Hotel:* Statler.

LAKSO CO., THE, *Booth 721*. Automatic tablet-bottling machine and inspection unit. *Personnel:* E. E. Lakso, R. H. Zeidler, Eugene Lakso. *Hotel:* Statler.

LAMSON CORP., Booths 9–10–11. Samples of products, utility conveyor, multi-stage blower, industrial vacuum cleaner, album of installation photographs. Personnel: C. F. Dietz, C. A. Burton, G. D. Beaver, A. J. Cole, H. C. Keller, G. Hennessy, C. S. Jennings, J. H. Webb, G. W. Williams, F. Roudebush, E. N. Davis. Hotel: Cleveland.

LA ROSE, W. T., & ASSOCIATES, INC., Booths 726–7. Electronic heat sealer. *Personnel:* W. T. La Rose, H. J. Cameron, J. L. Stratton, J. Moore.

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All along the line—from source to consumer—many kinds of perishable produce now travel safely and securely, with spoilage through handling held to a minimum, in wet-strength paper bags.

Since this versatile material is available to prepackers in a number of different types of bags, the selection of the right bag for the purpose is impor-

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The cellophane window bag helps keep vegetables and fruits fresh and crisp from distributor right to home kitchen. Transparent sheet permits consumer to see the produce, while attractive printed design on the paper heightens sales appeal of the package.



The mesh window bag is designed for shipping potatoes, oranges, apples and other "hard" produce when moisture retention is not important. Mesh window permits view of the produce, yet is sturdier than transparent sheet.



Even ice can be shipped direct from ice plant to consumer in wet-strength paper bags. $\ \, .$

*Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.

Photographs: Courtesy Union Bag & Paper Company

tant in attaining maximum efficiency at minimum cost.

Shown on this page, for example, are three distinct types of wet-strength paper bags, each designed to keep produce intact in its journey from distributor to store counter, to consumer. The reduction in handling costs and spoilage can well be imagined when one considers the methods used formerly: packing in big lots at the source, unpacking at the store, sorting and arrangement on store counters, handling and inspection by perhaps dozens of consumers before actual purchase, and finally individual selection, weighing and rewrapping in ordinary bags for the trip home.

Not only does prepackaged produce reach the kitchen *fresher* and in better condition, but sales are stimulated when consumers are offered attractively packaged items—the very appearance of which suggests quality, freshness and a minimum of handling by others.

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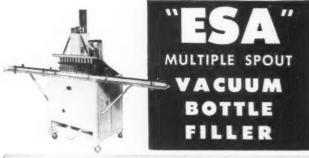


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LINK & CO., L., INC., Booth 519. Gummed-tape dispensers. Personnel: William Schwartz. Hotel: Cleveland.

MANN & CO., M. Demonstration of self-inking roller stamp. *Personnel*: M. Mann, William A. Force.

MARSH STENCIL MACHINE CO., *Booth 7*. Electric stencil machines and new pocket markers. *Personnel:* Walt Marsh, E. J. Marsh, A. S. Moyer, Gordon Bennett, Robert Larcey, Clayton Rantz. *Hotel:* Cleveland.

MERCHANTS BOX CO., Booth 508. Wooden chests, boxes, display cabinets, other packaging items. Personnel: G. Herbert, W. J. Ferris, M. Pepkin, S. Danson. Hotel: Hollenden.

MID-STATES GUMMED PAPER CO., Booth 620. Heatlabel papers, gummed label papers, tape, barrier wraps. Personnel: Burton L. Trodson, A. C. Kilberg, Paul S. Hoag. Hotel: Hollenden.

MILLER WRAPPING & SEALING MACHINE CO., Booth 115. Wrapping machine, gluer, sandwich maker, label dispenser, filling machine, bag sealer, etc. Personnel: M. H. Corley, J. P. Corley, R. H. Freeman, P. G. Freeman, C. W. Montgomery, F. J. Falletti, F. J. Kocarek, J. M. Hagberg. Hotel: Auditorium.

MILPRINT, INC. Meat casings, cellophane, Pliofilm, foil and glassine wraps. *Personnel:* Phillip Kappes, L. R. Zimmerman, Roy E. Hanson, Cliff Williams, Shy Rosen, Al Kosloff, William Heller, Harry Jones, Andy Fay, Stan Coumbe, Bert Hefter, Hugo Heller, Jr., Lane Johnson, Fred Chamberlin, Robert Cox.

MINERVA WAX PAPER CO., Booth 716. Moistureproof, thermoplastic, unprinted and printed bags, films, foils. Personnel: Raymond G. Hathorn, A. F. Gluck, R. C. McCaskey, W. L. Hogue, A. L. Patmore, Fred C. Gluck, John Brunt, Walter Symes, Joseph F. Thompson, Patrick E. Gray, Mrs. E. Oster. Hotel: Hollenden.

MINNESOTA MINING & MFG. CO., Booth 624. Display of tape uses and tape-application machines. Personnel: C. C. Smith, W. E. Zimmerman, P. W. Mereness, R. C. MacFarland, W. Aldrich. Hotel: Carter.

MODERN PACKAGING MAGAZINE, Booth 110. Personnel: Charles A. Breskin, Alan S. Cole, C. W. Browne, Lloyd Stouffer, Pearl Hagens, Val Wright, P. H. Backstrom, M. A. Olsen, J. M. Conners, R. C. Beggs, J. A. Drucker, B. W. Gussow, W. F. Kennedy. Hotel: Statler.

MONSANTO CHEMICAL CO., PLASTICS DIV. Graphic portrayal of transparent cellulose-acetate packaging and its aid to impulse selling. *Personnel:* James R. Turnbull, E. D. Kennedy, R. C. Evans, J. C. Brunner.

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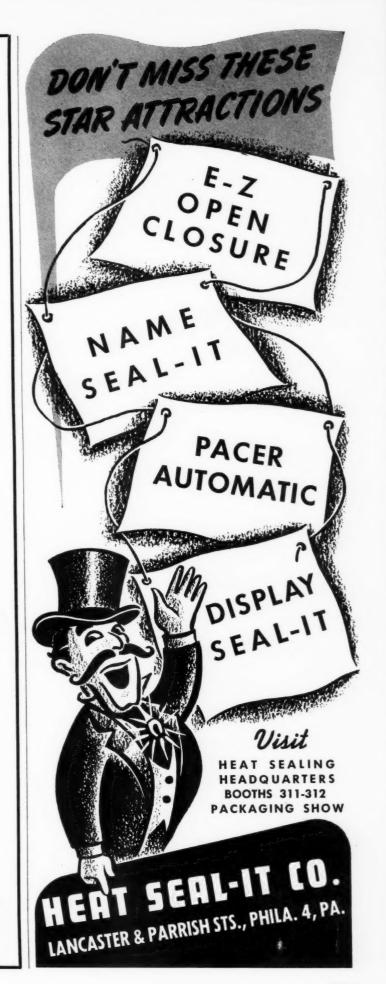
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MRM CO., INC., Booth 611. Automatic rotary vacuum filling machine. Personnel: H. D. Manas, Frank Rossette, V. J. Gallagher. Hotel: Hollenden.

MULTISTAMP CO., INC., THE, Booth 621. Stencil duplicators. Personnel: P. H. Mason.

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NASKO MACHINERY CORP. and WOLVERINE PAPER CONVERTING MACHINERY CORP., Booth 643. Aniline printing press, paper-seal embossing press, automatic cylinder press, roller washing machine. Personnel: Richard W. Nagel, L. Bischoff, B. Habbel, H. Nagel, William Koch. Hotel: Hollenden.

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NATIONAL WOODEN BOX ASSN., Booth 217. Latest developments in wooden boxes, crates and pallets. Personnel: C. D. Hudson, William H. Sardo, Jr., Charles E. Felt, T. C. Post. Hotel: Statler.

NEW JERSEY MACHINE CORP., Booth 122. Labeling, code-numbering, gluing machines, glues and adhesives. Personnel: George W. Von Hofe, R. Wellbrock, James T. Brown, Robert Mittricker, James Parsons, Kurt Neimeier, Stan Thomson. Hotels: Statler and Cleveland.

OHIO BOXBOARD CO., *Booth 303*. Study of typical packaging trends. *Personnel:* Arnold Crowell, J. N. Andrews, R. E. Smith, Marc Shofer, E. J. Brophy, J. C. Morris. *Hotel:* Cleveland.

OLIVER MACHINERY CO., Booth 404-A. Automatic

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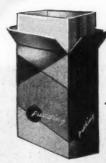
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OWENS-ILLINOIS GLASS CO., Booths 208-9. Bottles, other glass products. Personnel: E. F. Bertrand, A R. Kohl, W. M. Robertson, E. A. Hildreth, S. F. Davis, R. E. Delaplane, R. B. Bradley, K. A. Hamel, C. M. Dooley. Hotel: Statler.

PACK-RITE MACHINES, DIV. OF TECHTMANN IN-DUSTRIES, Booths 509-10. New sealing machine. Personnel: Wilbur Techtmann, Herbert Techtmann, Mrs. Gladys Techtmann, Joseph Kneeland. Hotel: Statler.

PACKAGE MACHINERY CO., Booth 104. New wrapping machine for heat sealing cellophane, new portable thermoplastic-labeling machine. Personnel: G. A. Mohlman, R. L. Putnam, Tom Miller, A. S. Lincoln, J. J. Kelly, J. R. Tindal, N. W. Lyon, E. F. Cornock, W. E. Gourley, William Kiel, E. L. Smith, E. G. Westervelt, H. Mosedale, B. Lyons, V. Pepitone, E. A. Hjelm, E. A. Wagner, William Kerber, C. R. Strehlau, G. D. Woody, Fred Todt, Edward Minneman, D. T. Hoskins, Hugo Schoener. Hotel: Cleveland.

PAISLEY PRODUCTS, INC., Booths 516-17. Adhesives, cellulose film and metal foil laminates, table gummer, information and demonstration of uses of products. Personnel: Earl C. Lenz, W. Cochran, L. J. LaBrie, Clarence Moser, Harvey Schamp, A. Berk, W. Kennedy, J. Morningstar, Julius Ranft, A. R. Nordone, D. Bookshester, M. Lenz, S. Stewart, S. Knox, M. Stempel, S. Schuller, E. Bearman, P. P. Morningstar, H. S. Miller, A. Krusick.

PAPER PACKAGE CO., Booth 640. Rectangular transparent boxes made automatically, paperboard set-up boxes, folding cartons. Personnel: M. J. de Vietien, Frank W. Messing. Hotel: Hollenden.

PETERS MACHINERY CO., Booth 512. Cellophane sheeting and stacking machine, cartons. Personnel: H. K. Becker, B. C. Lewis, J. Boehler. Hotels: Statler and Cleve-

PNEUMATIC SCALE CORP., LTD., Booth 105. Display of packaged and bottled goods. Personnel: N. S. Ross, W. E. Coughlin, R. S. Edling, R. H. Eiff, K. D. Doble, O. H. Hultin, J. Yates, L. F. Blackwell, S. R. Howard, Fred Todt, George Libby, K. M. Peterson. Hotel: Cleveland.

POTDEVIN MACHINE CO., Booths 12-13. Sheet gluing machine and label pasters. Personnel: J. Henry Richmond, W. V. Hunter, J. S. Hawkins, James S. Hamilton, Sumner Norton, Owens L. Denton, Jack Donohoe, Truvan Gibson.

REDINGTON CO., F. B., Booth 518. Samples of packages made on their equipment. Personnel: Charles L. Barr, E. A. Siebert, J. C. Hotton, Hamilton Allport, Jr., Anthony Walkey. Hotel: Cleveland.

REYNOLDS METAL CO., Booths 16-17-18. Packaging machine. Personnel: J. Louis Reynolds, C. F. Manning, M. B. Moody, W. D. Peters, J. C. Bjorkholm. Hotel: Stat-

RIEGEL PAPER CORP., Booth 34. Heat-sealing and other

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ROTARY TABLET PRESS

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New series 200-25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

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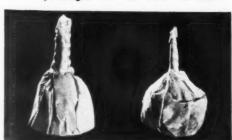
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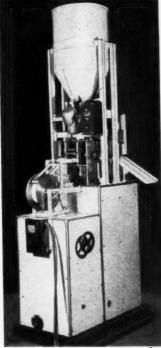
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eter, from cellophane, diafane, aluminum foil and waxed paper.

Fills—The Uni-Pak fills 60 of these packages per minute. Dual-feed models operate at twice this speed. The machine is equipped with either a meter filler or an auger filler.

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types of papers. *Personnel:* E. G. Penn, C. W. Hoffman, A. C. Moreau, P. M. Beach, T. F. Donoghue, A. G. Griswold, R. A. Simpson. *Hotel:* Cleveland.

RITCHIE & CO., W. C., Booth 14. Paper packages. Personnel: J. H. Crones, G. S. Denning, A. S. Daniel, T. H. Tredwell, J. K. McBain, J. I. Buchegger, R. L. Branson. Hotel: Hollenden.

ROSS CO., A. H., INC., SUBSIDIARY OF ROCKWELL MFG. CO., *Booth 608. Personnel:* N. J. Kenny, J. F. Currivan, H. F. Lampke, A. H. Ross, E. J. O'Brien, A. G. Hornney, N. M. Schaefer.

ROTO BAG MACHINE CORP., Booth 615. Bag-making machine in operation. Personnel: Richard Schnoor, Al Gaus, Jerome Fingerhut.

ROYAL & CO., THOMAS M., Booth 409. Flexible packages. Personnel: E. V. Ballard, J. S. Lovering, E. Kassing, W. Gilmore, F. Abbott. Hotel: Fenway Hall.

RUBNER, GUSTAVE, INC., Booth 706. Laminated metallic fabrics for cosmetic bags and other products. Personnel: Gustave Rubner, Jacob Binder. Hotel: Auditorium.

SCANDIA MFG. CO. New models of cellophane-wrapping machines. *Personnel:* W. A. Roberts, H. A. Rohdin, A. Jay, W. B. Bronander, Sr., W. B. Bronander, Jr. *Hotel:* Statler.

SEFTON FIBRE CAN CO., Booth 109. Group of packages to show range of products in fibre cans. Personnel: R. B. Busch, C. B. Graves, C. D. Wenstrup, L. R. Albers, A. J. Disch, R. L. Branson. Hotel: Hollenden.

SHELLMAR PRODUCTS CORP., *Booth 112*. Flexible packaging and packaging materials. *Personnel:* B. W. Martin, T. R. Baxter, W. L. Moore, Ben Verson, T. W. Koch, R. L. Lee, J. H. Huse. *Hotel:* Cleveland.

SHUMANN EQUIPMENT CO., Booth 201. Automatic bag-making machine and bags. Personnel: Harold F. Shumann, Clarence J. Hoffman. Hotel: Lexington.

SIMPLEX WRAPPING MACHINE CO., Booth 115. Bagmaking machine. Personnel: R. Gaubert, Hal Doty. Hotel: Auditorium.

SMITH CO., THE S. K., Booth 210. Various newly designed containers. Personnel: L. Richard Smith, A. A. Lubersky, K. G. Cooley, H. Duff Gordon, J. E. Hardy. Hotel: Hollenden.

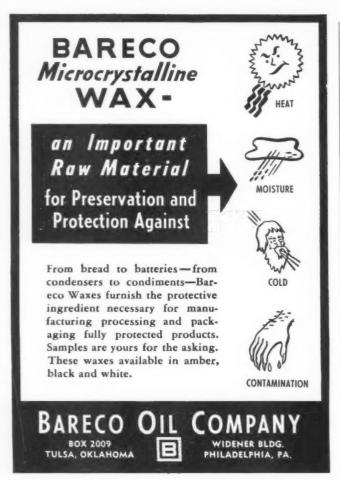
STANDARD-KNAPP CORP., Booth 21. Motion pictures of machines. Personnel: Karl Mayer, George Ingham, F. P. Lonsdale, Malcolm McFaull, L. F. Shattuck. Hotels: Statler and Hollenden.

STOKES & SMITH CO., Booth 202-3. Automatic packaging machine, containers and packages handled by machine. Personnel: C. E. Schaeffer, John S. Stokes, S. T. Brinton, M. P. Sullivan, Jr., L. G. Smith, C. H. Nitsch, H. E. Colburn. Hotel: Cleveland.

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SUTHERLAND PAPER CO., Booth 612. Custom-built cartons, laminated carton, display cartons, special packages. Personnel: Gordon Dilno, Don Wilson, Clifton T. Wilson. Hotel: Statler.

TABOR INSTRUMENT CO., Booth 642. Plastic-fabricating machines. Personnel: R. F. Tabor, L. S. Barker, J. F. Less, R. E. Bryant. Hotel: Hollenden.

TOMPKINS' LABEL SERVICE, Booth 504-B. Thermoplastic, greaseproof labels. Personnel: William H. Baile, Jr., Clarence Orth, R. Devlin Norris. Hotel: Hollenden.

TRIANGLE PACKAGE MACHINERY CO., Booths 506–7. High-speed weigher with automatic conveyor. Personnel: L. R. Muskat, Rex A. Stone, O. L. May. Hotel: Statler.

TWITCHELL, E. W., INC., PACKAGING DIVISION, Booth 504-C. Textile packagings, food packagings, set-up paper box supplies, shelf paper, shredded cellophane, gift wrapping. Personnel: N. T. Gates, W. F. Baker, W. W. Russell. Hotel: Auditorium.

UNION SPECIAL MACHINE CO., Booth 305. Unit for closing the tops of consumer-sized filled bags with double tape. Personnel: A. J. Feigel, W G. Booth, A. E. Brauch, H. C. Vircant.

U. S. AUTOMATIC BOX MACHINERY CO., INC., Booth 123. Automatic net-weighing and filling machine. Personnel: C. W. Wikstrom, O. W. Wikstrom, Jr A. C. Wikstrom, C. C. Fasch, A. L. Holmes, H. Krugh, O. L. Weidmann, C. Willingham, J. Fradenburgh, O B Duerner. Hotel: Hollenden.

UNITED BOARD & CARTON CO., Booth 601. Items in foil and laminated plastics. Personnel: H. W. Kephart, W. H. Allen, C. H. Plogman, T. Murdock, J. J. Fritz, J. H. Blunden. Hotel: Cleveland.

VAC-SPRAY MACHINE CORP., *Booth* 505. Spot-labeling machine. *Personnel:* Burton Toles, Jay J. Golfus, Robert D. Ervin, Rolf Eng. *Hotel:* Cleveland.

WAXED PAPER INSTITUTE, INC., Booth 635. Graphic listings of qualities and uses of waxed papers. Personnel: A. H. Noelke.

WEBER & CO., H. G., INC., *Booth 617*. Photographs and illustrations of paper-bag machinery. *Personnel:* H. H. Weber, Fred Lubeley. *Hotel:* Statler.

WEINMAN BROS., INC., Booth 610. Transparent-plastic boxes, cans, counter dispensers and displays. Personnel: Arthur Weinman, Ralph Heckendorf. Hotel: Statler.

WOOD CONVERSION CO., Booth 722. Protective padding, cushioning, insulation. Personnel: D. M. Pattie, P. L. Berquist, A. J. Moorman, R. E. Backstrom, J. D. Fischer, D. B. Anderson, H. B. Schutte, M. Burns, J. C. Orrell.

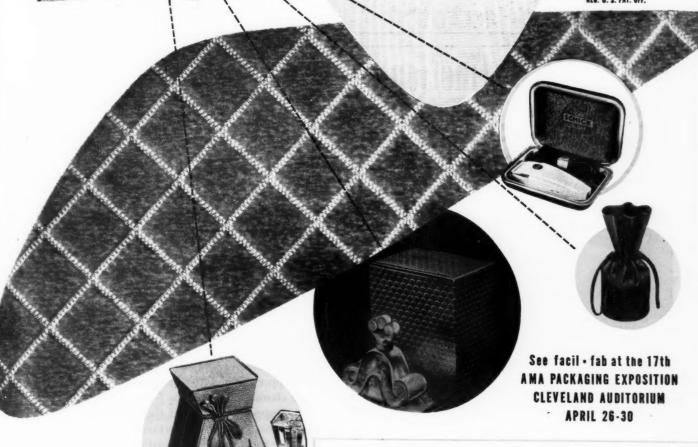
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Wrap-around pricer

(Continued from page 129) a balloon blurb pronouncing it, "M-m-m delicious!"

These wrap-around pricers are easy to apply, merely by latching them through die-cut slots provided in the back and dropping them over the package. They can be designed for adaptability to any type of container can, glass jar, bottle or box. For example, the Dale piece fits both a standard coffee can or glass jar. The Dole pineapple piece fits either a No. 2 or a 46-oz. can. The fit is accomplished by two or more slots spaced at intervals planned for the various sized containers on which the wrap-arounds are to be used. As illustrated in the sketches herewith, display pieces of this type may be used with small counter arrangements of packages, for large shelf displays, for aisle displays, end fixtures, etc. They can be used to introduce new products, to emphasize certain specialty features or different ways of using a product, but always with a place for indicating price.

The wrap-arounds are supplied flat to the dealer. He likes them because they add display excitement without taking display space. They are easy to apply (see diagram). It is said that their "life expectancy" compares favorably with any other soft-sheet material in this respect. A minimum usage also gives the effect of large display. Four or five of the pieces spotted in a 4-by-5-ft. frontage of packages seems to make the display of that product actually look bigger.

Credit: Wrap-around pricers, Schmidt Lithograph Co., San Francisco.

Aluminum foil

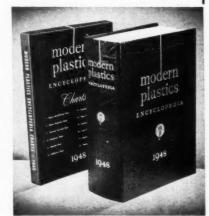
(Continued from page 191) hydrogen sulfide in the atmosphere, particularly in urban districts, form silver sulfide on silverware and produce the familiar tarnished-silver appearance. This is a matter of considerable concern to the silver distributor, as well as to the housewife. One large distributor of silverware has spent many thousands of dollars in repolishing silverware in order to make it acceptable for delivery. This repolishing can be avoided by means of a suitable wrapper of aluminum foil.

The data in Table VII present the results of wrapping individual silver teaspoons in the regular double tissue-paper wrappers in comparison with a single tissue wrapper and an overwrap of aluminum foil. Neither of the foil wrappers tested was heat sealed, but the dead-folding characteristics of the foil helped it cling closely to the teaspoon and so limit the access of air that in a storage period of 11 weeks no tarnish occurred. A very noticeable tarnish was produced on silverware wrapped in the regular way with plain tissue and stored for only two weeks under the same conditions

Table silver is customarily shipped in packages containing one dozen or more table knives or forks. It is a

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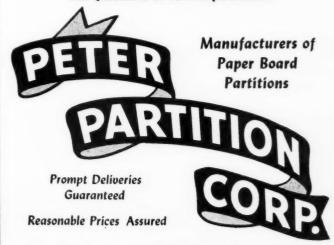
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139 West 20th Street New York 11, N. Y. * MANUFACTURED BY ORDNANCE GAUGE CO., PHILADELPHIA, PA. simple matter to place a heat-sealed aluminum foil wrapper around such a carton and protect its contents against tarnish for a very long period. Special articles such as bowls, trays, vases and the like can be placed in heat-sealed aluminum envelopes, so that when the article is wanted for use or display no polishing will be necessary. Once the trade understands the advantage of such a package, it will be in great demand.

The success of aluminum foil wrappers with tableware suggests its use for wrapping surgical sterling-silver sundries, such as silver cranium head plates, bone plates and screws, silver joint overlays, etc.

TABLE VII-WRAPPING TO PREVENT TARNISHING OF SILVERWARE

| | scription of wrapper on silver teaspoon | Period 1 week | 2 | 4 | nd deg 6 weeks | 8 | 11 |
|----|--|---------------|---|---|----------------------|---|----|
| 1. | Unwrapped spoon | 1 | 2 | 3 | 4 | 4 | 4 |
| 2. | Regular double tissue paper wrapper | 0 | 1 | 2 | 2 | 2 | 2† |
| 3. | Aluminum foil (0.00035 in.) + one-ply tissue | | | | | | |
| 4. | Aluminum foil (0.0005 in.) + one-ply tissue | 0 | 0 | 0 | 0 | 0 | 0 |
| | paper | 0 | 0 | 0 | 0 | 0 | 0 |

* Code for degree of tarnish:

0-No detectable tarnish.

1-Trace of tarnish.

2-Noticable tarnish.

3-Severely tarnished.

4-Tarnished black.

† Also showed pitting of the silverware.

Summary

Aluminum foil finds a wide variety of uses in the packaging field. The principal technical characteristics of foil which recommend it for these applications may be summarized as follows:

- 1. Impervious to moisture and gases (in certain gauges).
- Greaseproof.
- 3. Non-sorptive.
- Shrinkproof.
- Odorless and tasteless.
- Hygienic; non-toxic and sterile.
- 7. Resistant to corrosion: non-aging.
- 8. Dead folding.
- 9. Strong.
- 10. Functions well in laminates.
- Appearance; brightness and glitter. 11.
- 12. Reflects radiant heat; opaque to light.

Selected laboratory data point the way to the most efficient and economical ways to use aluminum, alone and with other wrapping materials, to solve difficult problems in the packaging of such varied products as foods, drugs, cigarettes, steel and silverware.

Reference

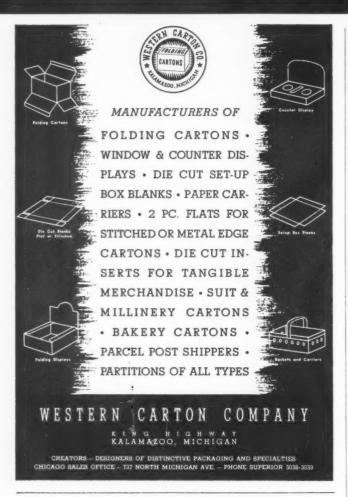
Cruess, W. V., Good Packaging, 8, No. 8, p. 30 (Aug., 1947).

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New data on acetate film

Following laboratory tests indicating the feasibility of heat-sealing film with slight modifications of heat-sealing equipment (Modern Packaging, Sept., 1947, p. 152), Celanese Corp. of America reports the further discovery that the film can be handled on conventional hand heat-sealing equipment without any special covering of the sealing elements when correct temperatures are maintained.

According to W. F. Cullom, director of sales of Celanese transparent films, J. W. Dickie of Lierman's Market, Napa, Calif., reports the use of a Wells Iron with thermostat (Modern Packaging, March, 1948, p. 156) to hand heat seal acetate-wrapped fresh meats. On Sept. 18 tests were conducted in the pre-packaging department of a large supermarket in Montreal. Acetate-wrapped bacon was heat sealed on conventional hot plates used by this store without difficulty, according to Mr. Cullom. No change in technique or temperature of the plates was made, he says.

The temperature and contact conditions that have been found most successful are reported as follows:

| Grade of acetate* | Contact | | | | | | |
|-------------------|----------------------|--|--|--|--|--|--|
| | (1 sec. at 1 p.s.i.) | | | | | | |
| P912 #88 | 365 to 375 °F. | | | | | | |
| " #100 | 46 46 | | | | | | |
| " #120 | 66 66 | | | | | | |
| P903 #88 | 385 to 395°F. | | | | | | |
| " #100 | 46 66 | | | | | | |
| " #120 | 66 66 | | | | | | |
| P904 #88 | 420°F. | | | | | | |
| " #100 | 46 | | | | | | |
| " #120 | 4.6 | | | | | | |
| * Lumarith. | | | | | | | |

It is recommended that No. 00 sandpaper be used for initial cleaning and maintenance of the heat-sealing surfaces. If the package or heating element moves, light pressure is recommended to prevent stringing or sticking of the stock. Recommended temperature must not be exceeded or stringing and sticking to the elements will result.

A.M.A. marketing study

For the first time in many years marketing and selling have increased as a factor in business planning to such an extent that they are now more important than production or finance, the American Management Assn. reports in a survey of more than 1,000 business firms dealing in both industrial and consumer products.

The survey, prepared for A.M.A.'s Conference of Marketing Executives held in March, discloses that industry's demands and requirements of business's customers is beginning to exert more influence on business planning and operations than money, manpower, materials or manufacture. The central problem of achieving maximum profits rather than maximum sales has arisen because of the economic and psychological impact of the war and its aftereffects, according to the study.

HOW TO MAKE SALESMEN

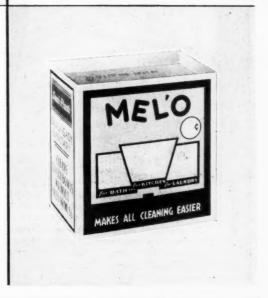
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You can make your corrugated shipping containers do a double job of selling by letting Matthews design a selling message for them to carry. Whether you ship by plane, rail or truck, each container will be seen by many people—and the Matthews designed message will talk directly to them.

Matthews will do the whole job of design and manufacture of the necessary printing dies, assuring you of attractive, effective and economical box printing. Contact your local Matthews representative or write for full details today.





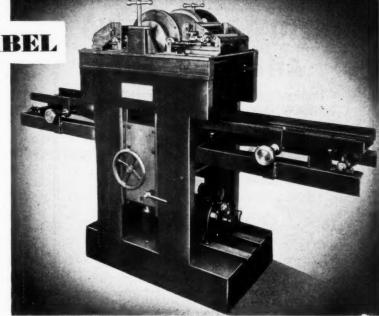
Good-bye

... to the PAPER LABEL

The "Paperless" Multi-color Automatic Labelling Machine labels cans and bottles—square and oblong as well as round—with one to four perfectly registered colors in *one* operation. This latest innovation in the packaging industry does a perfect labelling job *at low cost*.

VERSATILE

The size of your container does not matter as the "Paperless" Labelling Machine can be used on sizes from one pint to five gallons and may be adjusted from the smallest size to the largest in only two minutes. It works equally well on glass, metal, plastic and fibre containers.



This new unit contains no complicated mechanisms. It is the only machine of its type which is adjustable to various sizes and diameters. Write for complete details.



306 Marguette Building, Detroit, Michigan, U. S. A.





CUSTOM LAMINATING AND COATING

Laminating of Foil, Acetate, Glassine, Pliofilm, Cloth & Paper for all purposes

SPECIAL PLASTIC COATINGS for Heat sealing, Greaseproofing, Scuff proofing & Waterproofing

» » Standard Products « «

Foil Labels
Florist Foil
Leatherette
Greaseproof Kraft
Waxed Locker Paper
Jar & Bottle Cap Liner
Slot Insulation (Motor)
Foil to Board in colors
Heat Sealing Bag Material
Acetate to Paper in colors
Decorative Paper Backed Foil
Cell-O-Mesh (Glass Substitute)
Vinyl, Foil, Cloth (Engine Bag)
Foil Locker Paper (Frozen Food)
Foil, Kraft, Cloth Packaging Materials
Polyethylene, Foil, Kraft, Cloth (Engine Bag)

also Custom Sheeting, Slitting & Rewinding

THE FLOYD A. HOLES COMPANY

BEDFORD, OHIO

Aluminum cans

(Continued from page 137) as to the suitability of plain, anodized or lacquered aluminum cans for the product in question.

It is, however, absolutely necessary to conclude actual canning trials to obtain reliable results. Packing tests should include all variations which are liable to turn up during production on an industrial scale, both as regards the composition of the foodstuff and its treatment during the canning operation. Cans from such trials must be stored for a long time, normally for years, to prove that no detectable amount of hydrogen will be evolved prior to the end of a normal storage time at a fixed temperature.

Special properties of aluminum cans

Pure aluminum is a softer material than tinned steel of the same gauge. It is, therefore, necessary to handle aluminum cans with more caution than tinplate cans during fabrication, production and transport.

In the same way as containers made from glass, tinplate, plastic or paper are characterized by their physical properties, an aluminum container has its special qualities. Experience has shown that the greater softness of aluminum does not necessarily mean a drawback. The cans may be strengthened by corrugations and, with a little more caution in handling and with adequate outer packaging, the somewhat inferior mechanical properties of aluminum will turn out to be of little significance. Before the war, more than 500,000 cases of Norwegian sardines and kippered herring in aluminum cans were exported to the United States with entirely satisfactory results.

Sardine cans are packed in wooden or paperboard boxes, dependent on the kind of transport, always with intervening layers of paperboard. Circular cans are wrapped in corrugated sheets and placed in rolls or in special supports in wooden or strong corrugated boxes.

Since aluminum is a more "dead" material than tinplate, a sterilization in ordinary retorts will give the can a swelled appearance, which is prohibitive from a sales point of view.

In over-pressure retorts, which are compulsory for aluminum cans, a pressure is developed during sterilization and the subsequent cooling which compensates for the internal pressure in the cans. In this way the swelling of the can and any excessive strain on the seams are eliminated.

A number of different types and sizes of aluminum cans are on the market in Norway. A flat $^1/_4$ dingley can is used for brisling and sild sardines. Oblong types are used for kippered herring. A series of circular cans is also fabricated from the small 78 by 16 mm. crab can to the 0.9 liter packers' can, with a diameter of 137 mm. and a height of 67.5 mm. All cans have corrugations to add to the strength of the cans and to give aluminum cans a distinctive appearance.

The rolling mill of A/S Nordisk Aluminiumindustri at



G-E PLASTICS WATCH BOX

This suggested design is for a plastics package that will lead a double life! First, General Electric designed it to set off a fine timepiece to best advantage. But then, after the watch is removed, the attractive case can serve as an assortment box, to hold cuff links, belt buckles, and other jewelry.

Its solid base of rich black is surmounted by a smooth, clear cover in which a reproduction of an Audubon bird print is molded. This is just one of the plastics packaging ideas to be found at No. 1 Plastics Avenue. This design—or one drawn especially to meet your own specifications

—can be produced for you as part of General Electric's complete plastics service. Design, engineering, and molding—all the facilities you need are at your disposal for just the right package to help merchandise your product.

Take advantage of this unique service. Before you market a new product—or if you want to stimulate sales of an old one—talk over fresh, new packaging ideas with General Electric. Write to Section AB-4, Plastics Division, Chemical Department, General Electric Company, I Plastics Avenue, Pittsfield, Mass.

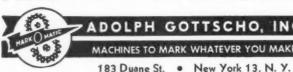


EVERYTHING IN PLASTICS

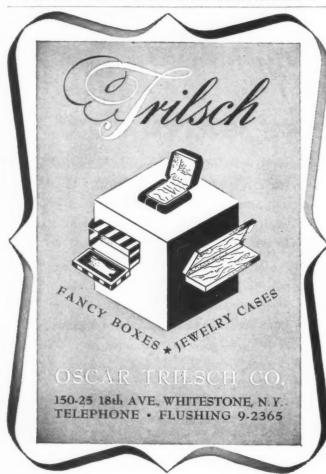


Also, these other famous machines that are reducing packaging costs for America's best-known companies . . .

ROLACODER • CONVEYOR-CODER • MARKOMATIC "9"
 INDUSTRIAL PRINTER • CYLINDAPRINTER • ROLAMARKER



SEE OUR CATALOG IN SWEET'S FILE FOR PROCESS INDUSTRIES



Holmestrand supplies the anodized coiled sheet, either directly to the canning factories or to can-making companies. These companies stamp the cans in automatic presses at a rate of 8,000 sardine cans per hour. Rubber rings have up until now been used for tightening the seams. A Dewey & Almy type "soluble" rubber compound or similar compounds will hereafter be automatically applied to the lids.

At present, the cost of aluminum sardine cans in Norway is \$1 more per thousand than tinplate cans.

Stoker in a carton

(Continued from page 143) space inside to accommodate the supply of bulky crates, so they were left outside at the mercy of the sun, rain and snow. Now these units can be piled one on top another—up to three in the space formerly required by two of the crated stokers.

The new package benefits the dealer in other ways. Instead of knocking apart and manually carrying the heavy stoker down into the customer's basement, the installer can easily slide the whole cartoned stoker down the basement steps.

The dealer saves on shipping charges, too. Whereas it was formerly possible to get only 50 Coal Flow stokers into a box car for a carload shipment, a carload now constitutes 75 units.

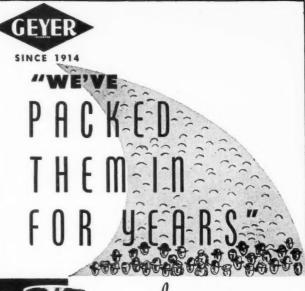
The new Iron Fireman package comprises two pieces: the nested carton which holds the stoker transmission, worm-housing and retort; and a separate smaller carton which contains the bin-feed worm lengths and additional fittings. The complete stoker package consists of the two basic cartons which interlock and attach to a wooden skid. The stoker is built up on the skid, to which it is belted and strapped. As the stoker moves along the assembly line, the basic cartons and the required pieces of die-cut inner packing enclose it.

The carton is constructed of double-face board consisting of two 0.016 sheets laminated together for inside and outside liners, with a 0.009 corrugated sheet, C flute. The outside cartons are constructed in two sections—each having special stitched die-cut panels to allow a channel for the stoker worm-housing and airduct extension. They are received flat at the Iron Fireman plant and stored near the stoker assembly line, another space-saving advantage.

Merchandising appeal is not overlooked. A buyer now sees his new stoker brought into his home in a handsome green package with the red-and-black Iron Fireman trademark visible on each side and with "The Iron Fireman Coal Flow" printed in yellow.

Due to the success of this carton, packaging methods for the entire line of Iron Fireman domestic heating equipment, including various models of bituminous and anthracite stokers and oil burners, is now being revised.

CREDIT: Cartons, Hankins Container Co., Cleveland.



t is a matter of record that the "GEYER" Filling Machines have "packed them in" by solving packaging problems for the food industry over a period of thirty-three years.

Model B. Single-cylinder,

> Six cylinder filling ma-chine with jar cleaning device.

illers are straight line multiple cylinders ... Designed for CLEAN CUT OFF FILLING for products that seek their own level . . . BOTTOM UP FILLING for semisolids . . . No drip . . . Clean Filling . . . Entirely automatic . . . Readily adjustable to any size or shape container . . . Maximum production output.

YOUR NEEDS Tell us what prod-

Six cylinder pre-serve and jelly filling machine.

uct you want to fill and the speed required.

THE MOST PROMINENT FOOD PACKERS **USE GEYER FILLING MACHINES**

JAMS SYRUP **JELLIES**

CHEESE GREASE GLUE PASTE

LACQUER MAYONNAISE AND SIMILAR PRODUCTS

PEANUT BUTTER APPLE BUTTER VANISHING CREAM

FILLER MACHINE CO.

1247 E. MONTGOMERY AVE., PHILA., PA.

IT PAYS to buy from one

. . . particularly when that "source of supply" is prepared to design and furnish a complete line of quality packagings for their specific field . . . promptly.

source of supply



BEAUTY-PAK YOUR PRODUCTS

A complete line of packagings serving the Hosiery and other Textile Industries, including plain and printed wraps, folders, inserts, envelopes and box covers.



BE SURE WITH PAKSURE

A complete line of wrappings, bags, envelopes and boxes, etc., for all food packaging including candy and frozen foods. Stock or original packagings designed by specialists for sure protection and "eye appeal."



SET UP YOUR PACKAGES WITH SEETAG

Supplies for the set-up box manufacturer which help make-up the finished package he produces including glassine, Kraft, tape, cover papers, lithos, linings, chocolate board, padding, etc.

See us at our Booth 504-C at the Packaging Exposition in Cleveland, April 26 to 30.

PACKAGING DIVISION EEE Public Ledger Bldg. W. Twitchell Incorporated Philadelphia 6. Pa.

The MASON MAILMASTER...



MAIN OFFICE ATTLEBORO FALLS, MASS. NEW YORK OFFICE 175 FIFTH AVE.

FACTORIES: ATTLEBORO FALLS AND TAUNTON, MASS.

MANUFACTURERS OF A COMPLETE LINE OF SET-UP BOXES

OX BOX Provides

Protection · Re-use · Display

That's what you get when you package your product in the new folded plastic box—the OXBOX. Whether you make jewelry or blankets, the OXBOX offers the perfect package for your product. And best of all, the OXBOX can be used and re-used. It's never thrown away.

Formed from rigid cellulose acetate or vinyl sheeting without cement or solvents of any kind, OXBOXES are designed to specifications in any size or shape. They may be opaque or transparent—in combination with decorative papers and in unlimited variety of colors. Give your product new sales appeal. Put it in an OXBOX.

Information and samples on request.

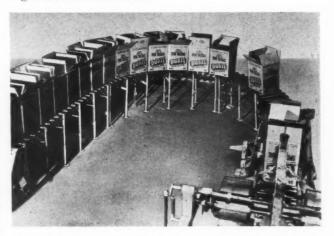
We license and furnish equipment for manufacturers desiring to make the OX BOX.



Conveyors solve space problem

How conveyor systems can cut manpower and help solve space problems is illustrated by their use in the Trend plant of Purex Corp., South Gate, Calif.

The plant in which Purex set up its production line for Trend, a household laundry product, was adequate, but narrow. Since further construction could not be secured, there was danger that the packaged product might arrive at a dead end.



By setting up accordian conveyors, such a possibility was averted. Two sections, together with a power belt, and then two more sections, enabled the company to utilize four loaders and keep a continuous stream of cartons rolling into and out of the sealer machine.

The conveyors are easily handled by one man. They expand from 3 to more than 10 ft. and have legs adjustable to permit gravity rolling of products. Because they are capable of bending 180 deg., products may be sent around corners without falling off.

CREDIT: Conveyors, Food Machinery Corp., Riverside, Calif.

Shipping wet cellophane

A technique for shipping regenerated cellulose film in water has been developed by Dr. C. M. Rosser, technical superintendent of the Fredericksburg, Va., plant of the Sylvania Division, American Viscose Corp.

Commercial cellophane which has never been dried is used primarily by research laboratories as a membrane material in experiments.

By the new technique—patent pending—the wet regenerated cellulose film (never dried) is rolled on a glass tube; the tube on which the film is wound is then inserted into a seamless synthetic casing, filled with water and tied off securely at both ends. The whole thing is wrapped in water-vaporproof cellophane and, finally, the finished package is placed in a paperboard tube, with shredded cellophane packed into the ends to absorb sharp jolts. After the two openings on each side are covered with plug ends, the carton is ready for shipment.

Test your knowledge of what food customers want



How many customers say glass containers give them more advantages than other containers?

- ☐ 2 out of 10 7 4 out of 10
- 7 out of 10

7 OUT OF 10. Authority: National consumer survey of packaging preferences.



Are women buying



- more, less, or
- the same, amount of baby food in glass?

MORE women are buying baby foods in glass than ever before. And for the same reasons they prefer other foods in glass. A tip for more impulse sales of your product!



Is the swing to glass as the favored food container growing?

- Yes

"YES!" The number of housewives who say they want to "See before they buy" has doubled since 1939.



How many readerimpressions is it possible for this and other **Duraglas** container advertisements to make during 1948?

- 7 100 million
- ☐ 300 million ☐ 500 million

500 MILLION! In fact, the swing to glass is being continuously intensified by consumer advertising which is now in its 9th consecutive year.

SCORING

Three or four right . . . you've discovered the profit potential of glass-packed foods. Your future is bright as glass!

Two right . . . you're on the right track, but you better take full advantage of the power of glass to boost sales . . . other packers are!

One or none right ... you are losing sales to your competition. Pack in glass! Give customers a chance to buy your food the way they want it—in glass!

aqlas containers sell on sight

OWENS-ILLINOIS GLASS COMPANY

TOLEDO I, OHIO . BRANCHES IN PRINCIPAL CITIES



Specializing in extra large sizes.

West Coast PACKAGERS

GET QUICK SERVICE ON CELLOPHANE BAGS!

Printed and plain—also sheetwraps, continuous rolls. Complete design and technical service available. Strategic West Coast location insures quick deliveries. Send us your samples and let us quote on your requirements, or consult our nearest representative. Represented throughout the West by:

BLAKE, MOFFITT & TOWNE

San Francisco, Oakland, Fresno, Sacramento, San José, Stockton, Los Angeles, San Diego, Phoenix, Tucson, Portland, Seattle, Spokane, Tacoma and Boise.

MODERN CONTAINERS, INC.

3220 E. Olympic Blvd.

Los Angeles 23, Calif.



If you need speed plus versatility in a filling machine, the **PACKER** Liquid Filling Machine will meet your specifications.

SEMI-AUTOMATIC, FAST

The **PACKER** has an automatic overflow. You can easily couple it to your present packaging line. It works fast—up to 80 filled bottles or cans per minute.

A simple adjustment varies the size of the fill from fractional ounces to gallons. The filler is easily cleaned. Hence, changeover from one liquid to another takes no more than a few moments. The **PACKER** Liquid Filling Machine operates by either VACUUM or GRAVITY action with rapid interchangeability between both methods.

IMMEDIATE DELIVERY • MODERATELY PRICED
Write for free descriptive literature.

PACKER

MACHINERY COMPANY

30 IRVING PLACE, N. Y.

GR 5-8223

Steel shipping containers

(Continued from page 171) the consumers who have to pay the bill eventually. Loss and damage would be greatly reduced by such equipment. The direct costs attendant to repeated construction of makeshift substitutes through all the years of service of a car's life would undoubtedly pay for the original installation many times over. Granted that carriers are experimenting with several loading devices, out of these experiments may come some new techniques to improve this feature of the shipping problem. It has confronted the shipper for many years and the waste continues. The problem should be solved.

Critical hazards

The data show conclusively that there exists what might be called critical hazards for commodities of different types. This fact highlights the importance of making a study of the special container requirements of specific commodities and emphasizes the complexity of the problem.

In general, only two or three hazards seem to be responsible for the majority of damage encountered by the various shipments of individual products. These hazards not only differ for various classes of commodities, but create the greatest number of damaged containers. They are not necessarily the ones which create the greatest amount of claims, although there is frequently a very close parallel.

To illustrate this point of critical causes of damage, take the group classified as metal items, which includes automobile parts, tool boxes, metal stools, garment hangers, stoves and similar merchandise. A study shows that approximately 85% of the damaged cases are the result of three hazards or causes: flaps unsealed, 33%; rough handling, 30%; weak or broken bracing, 22%. All of the claims *filed*, however, were the result of two hazards, only 22% being caused by lack of bracing, 78% by leaky cars.

In the case of cereal shipments, 91% of the visually damaged cases were damaged as the result of three hazards: nails, wires, boards and straps not removed; poor car-door blocking and flaps coming unsealed. The later cause was, again, not responsible for any claims. Of the claims filed, however, 56% were the result of damage from nails, wires, boards and straps not removed. The balance of 44% of the claims was filed on cases damaged as a result of poor car-door blocking.

Similar situations were disclosed for other commodities. It is obvious, that the peculiar characteristics of your product demand special consideration when designing packages, car loads and car bracing or blocking. Vulnerable points must be recognized and adequately safeguarded.

Conclusion

How good must a shipping container be?

It must be good enough to assure the safe, economical and rapid handling of merchandise during storage and

BIG INCH NO. 3 AUTOMATIC PACKAGE SEALER FOR PRESSURE-SENSITIVE TAPE



at a touch of the levermeasures—dispenses—cuts 11/2", 21/4" or 3" strips

Here, at last, is a modern, fast, business-like package sealer for handling tacky tape with no mess -no nuisance-no waste! If you use pressure-sensitive cellophane tape for sealing, banding, decorating, attaching, coding — practically any short-strip application -BIG INCH No. 3 is the machine for the job!

Handles cellophane, acetate and light paper pressure - sensitive tapes on 3" cores—roll diameter to 4%"-widths to 1".

Check these special features:

- An easy, quick pull of the operating lever feeds automatically measures and cuts desired strips either $1\frac{1}{2}$ " or $2\frac{1}{4}$ " or 3" long.
- Measures strip—reduces tape costs. Holds measured strips flat, ready for pick-up-no snarling, no missticking.
- One-hand operation leaves other hand free to hold package.
- Encloses tape roll—retards drying out of tape-protects tape against dust, lint, spoilage.
- Simple and convenient to load.
- Sturdy, well-balanced construction-won't creep.
- Streamlined design-compact, goodlooking-takes little counter

Write today for full details CS.INC. SHELTON, CONNECTICUT

WORLD'S LARGEST PRODUCERS OF TAPE DISPENSERS AND SHIPMENT-SEALING SYSTEMS

EMP "COMPLETE UNIT" PHOTO-ELECTRIC CUT-OFF REGISTER CONTROL

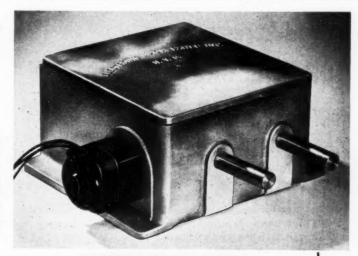
For any machine needing fast, positive registration and cut-off

The EMP Photo-Electronic Cut-Off Register Control is the only device of its kind furnished complete with every component,* ready for immediate attachment to your printing press, bag making, packaging or other machine that needs registration or cut-off control. It regulates web position electronically, insuring perfect color registration and material cut-off. The motor driven differential assures freedom from fluttering and whipping and guarantees longer life.

Using the EMP Cut-Off Register Control on your machine offers these 4 additional advantages:

- 1. INCREASED PRODUCTION
 - Automatic registration allows the operator to give more attention to the functioning of the machine, thereby reducing "down time."
- 2. REDUCED INSPECTION COSTS

Since register is maintained automatically, there is no necessity for constant visual inspection.



IMMEDIATE DELIVERY

3. EASE OF OPERATION

Adjustments require only turning a thumb screw. No further attention is required once the Cut-Off Control has been set for a specific bag or wrapper.

4. IMPROVED PRODUCT APPEARANCE

All printed matter is accurately positioned, providing a neat, attractive appearance.

*Photo-electric scanner, electronic Thyrotron amplifier, motor, selector and differential switches.

Write today for price.

ELECTRONIC MACHINE PARTS, INC.

204 Lafayette Street, New York 12, New York



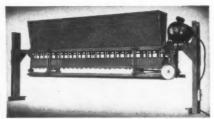


Murray Container Corporation's newly-opened Philadelphia plant, complete with the most modern equipment available now offers the finest in corrugated and solid fibre boxes and sheets, cleated fibre boxes, and die-cut specialties. We can help you toward greater economy and efficiency. Your inquiry will bring a prompt and detailed response and quotations.

MURRAY CONTAINER CORP. 23rd & WASHINGTON AVE., PHILA. 46, PA.

Designed FOR THE CARTON INDUSTRY

DRY POWDER
"OFFSET"
ELIMINATOR



Examine these advantages:

THE machine is attached to the delivery rails of the press so that a fine film of powder is sifted on the wet ink over the entire board.

Unaffected by climatic conditions.

An "across the board" adjustment of powder flow identical to the ink fountain.

Keeps the press room air clean.

Get the complete story on the Winton Dry Powder "Offset" Eliminator today. Send for your free copy of our descriptive folder.

WINTON ENGINEERING CO.

216 West Elder Street

Cincinnati, Ohio

transportation. It will fulfill this specification only when we individually adhere to this code:

- 1. Practice perfect shipping the year around.
- 2. Make sure you have the real facts concerning loss and damage sustained by the shipments you make.
- 3. Remember that compliance with Rule 41 and similar rules only will not assure adequate packing.
- 4. Study the special packing requirements of your products and suit your package to them.
- 5. Remember that packing engineers should have a say during product development as well as after, so product design will facilitate economical packing.
 - 6. Purchase containers from reliable suppliers.
 - 7. Seal containers properly.
 - 8. Follow good carloading practices, specifically:
- (a) Use clean cars. Watch especially for nails, old strapping and other projections.
- (b) Use cars in good repair. Watch for signs of leaky roofs, broken boards, uneven floor racks.
- (c) Load tightly in all directions and arrange the load properly. Particularly avoid partial layers.
- (d) Brace adequately as to design, material and strength.
 - (e) Block car doors when necessary.

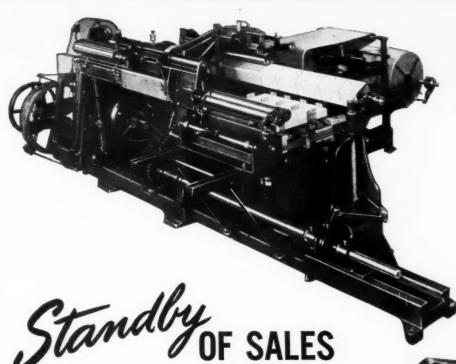
If you do these things, a high percentage of the claims now necessary will be avoided and the need for stronger, more costly containers eliminated.

Some time in the future, this same question will be answered with definite test specifications expressed in fundamental engineering units. When that time will come, no one can predict today. However, the fibrebox and board industry is definitely embarked on research programs which will elevate the art of shipping-container application to a more exact science.

TAPPI test methods

(Continued from page 192) package making. The method consists of coating the exterior of the test package with a solution of stannous chloride and then blowing hydrogen sulphide into the package by means of a hollow needle. Wherever there is a mechanical opening or porous area, a yellow color will appear. The method can be applied to flat samples by clamping into a cup, coating the exterior with the stannous chloride solution and passing the hydrogen sulphide into the cup. This method has been well proved and can be expected to be presented by the committee as a suggested standard.

It has been suggested that the TAPPI testing committees arrange a fall meeting to accelerate the work and to provide for longer and more intensive meetings than was possible during the annual February meeting, where there was unavoidable conflict of meeting time with concurrent programs. This should greatly accelerate the programs of the various committees engaged in this important phase of technical progress. There will be a later announcement of the date and place of the fall testing committee meeting.—C. A. S., Jr.



OF SALES
AND COST MINDED
PACKAGE EXPERTS



KNOWLTON AUTOMATIC CONVOLUTE PAPER CAN WINDER

Designer, production man, salesman—whichever expert weighs the sales value or cost of making your containers—will vote unanimously for a Knowlton Automatic Convolute Paper Can Winder to do the job. It winds a variety of round or irregular shaped can bodies of 3 to 6 plies—134" to 8" in diameter or across diagonals. It turns out and labels 5 bodies at a time. Production speed {according to size} up to 150 can bodies per minute—and only one operator. The Knowlton Automatic Convolute Winder has mechanical advantages that will appeal to any cost-troubled production man—and produces a finished eye-catching container that keeps products profitably moving off store shelves and counters.

BOSTON 637 Massachusetts Ave (ARLINGTON)

GX RINGS



BROOKLYN

CHICAGO

TORONTO, CAN.

Pucific Coast Representatives
H. W. BRINTNALL CO.
Los Angeles, San Francisco, Seattle

ROCHESTER, NEW YORK

e

d re of

G

HAVE YOU CONSIDERED THIS CONTAINER?

The unique construction of this container* assures that the cap stays tightly sealed regardless of the number of times it is opened and closed. The container is attractive, protective and is made in various lengths and diameters. It is perfect for safe packaging of ampules, vials, pencil leads, roll film, fountain pens and points and many other products.

We can apply your label to any surface of this container or print the container, one color ink on white or colored stock.

Adaptable to automatic filling and closing. The box that adds shelf appeal while affording perfect protection.

Ask for samples and prices.

* Pat. Pending

Ø

NIEMAND BROS. Inc.

37-01 35th Avenue

Long Island City 1, N. Y. RAvenswood 8-0909

KINKS IN YOUR PACKAGING LINE?

Our job is to supply standard equipment to do standard packaging jobs like wrapping, sealing, conveying and filling.

We also design and engineer efficient packaging systems and design and build special machinery for special packaging needs.

If you need any kind of help in setting up or modifying a packaging operation, we'd like to consult with you.



Visit Booths 5 & 6 A.M.A. Packaging Show April 26-30

New Candy Pop Wrapping Machines. Cellophane wraps 120 Iollipops per minute with 2 operators.

Delivery in 60 to 90 days. Very low cost.

WRAP-ADE MACHINE co.

778 Bergen Street

Brooklyn 16, New York

Phone: NEvins 8-8052

Package copy planning

(Continued from page 114) impractical. They prefer the tabular style, however, when there is room for it. They have done a great deal to break up long directions with subheads, leader caps or italics, sometimes in contrasting colors, to make each step in the recipe preparation easier to follow. They have used the "how-to-do" line-illustration technique most effectively, particularly on the new four-color Birds Eye packages. They have done much to emphasize essential points, such as the cooking requirements for Minute Rice (see illustration) which can be ruined if cooked longer than specified. They are particularly adept at arranging mouth-watering food illustrations in color which are becoming more and more essential to package sales appeal.

In its 20 years of operation, this Consumer Service Department, through its editorial division, has made better cooks out of millions of consumers and has been one of the company's most valuable assets in building confidence in General Foods products. "Alumnae" of this department are scattered all over the country in large food industries performing similar services. This work and procedure are convincing proof of the big value of the little words in small type on every package to win consumer good will and product acceptance.

Best folding boxes

(Continued from page 173) Fleishhacker Paper Box Co. for shipping boxes it produces for Flowers of Hawaii, Ltd., for its Vanda orchids and anthuriums.

Recipients of honorable-mention awards in this phase of the competition included Gardner-Richardson Co. for Hewett P. Mulford Co. (azalea collars); Brooks Bank Note Co. for Wm. E. Wright & Sons Co. (ruflling and trimming); American Coating Mills Div., Owens-Illinois Glass Co., for Detroit Gasket & Mfg. Co. (gasket sets), and Robert Gair Co., Inc., Cleveland Cartons Div., for McKee Glass Co. (oven glassware).

Judges of the 1948 competition included C. W. Browne, editor in chief, Modern Packaging; Naylor Rogers, Keystone Broadcasting System; William G. Connelly, package designer, and C. J. Carney, Jr., managing director, Industrial Packaging Engineers Assn. of America.

Sessions of the FPBA 1948 meeting were held on March 10, 11 and 12 at the Drake Hotel, Chicago, with the annual banquet and cocktail hour on March 11. As a new feature, the morning of March 12 was devoted to conducted tours of plants in the Chicago area, in which conference attendees had an opportunity to observe the latest developments in production of boxes and supplies.

CORRECTION: The Silvo silver-polish package, illustrated on p. 107 of the January issue, was incorrectly described as having molded closures supplied by the Hazel-Atlas Glass Co. Hazel-Atlas supplies the bottles, but the molded Artmold caps are furnished by Armstrong Cork Co., Lancaster, Pa.



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Manufacturers of

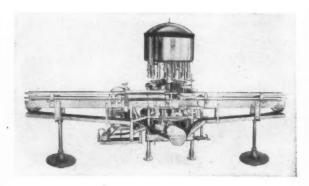
PRESENTATION BOXES

JEWELRY FINDINGS AND SOLDERS

TROPHIES • MEDALS • BALL CHARMS

F. H. NOBLE & COMPANY 559 West 59th Street, Chicago 21, Illinois

Here's a filling solution that lasts for years!



HORIX FILLER can handle irregular or standard shapes... wide mouth or small!

Versatile, high-speed Horix Rotary Fillers are fully-automatic machines, so sturdy in construction and practical in design that users expect and get decades of service from them. An almost unlimited variety of still liquids, light or semi-fluid, can be filled into odd or standard shape containers from ounces to gallons, with neck openings as small as 3%". Depending upon filler model and container size, the operating speeds of Horix Fillers range up to 400 per minute. Mechanical safety devices prevent waste of product, broken containers, and the costly delay of conveyor line jams, at any filling speed.

Regardless of what you are filling, the chances are that a Horix-engineered Filler can be the solution for you. Write today, describing products and containers to be handled, and speed desired. There is no obligation.

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Exhibition Hall, Cleveland Auditorium Cleveland, Ohio, April 26 through 30

HORIX

MANUFACTURING CO. DEPT. D PITTSBURGH 4, PENNA.

CONVEYORS and FILLERS

Margarine squeeze

(Continued from page 123) ture, prior to filling and after the filling operation.

Future possibilities

Although its low-temperature characteristics would appear to rule it out for frozen foods, the vinyl-nitrile rubber film has extremely interesting possibilities for various other packaging jobs, particularly if cost is brought down.

Harold B. Reed, manager of Cudahy's margarine department, points out possibilities for soft products that now have to be canned for export, similar to both margarine and butter, through which important cost savings could be made due to reduced weight. He also sees its possible use for such items as poultry and sliced bacon.

The complete absence of toxicity and taste, combined with great strength, is unusual in a plastic film and suggests its use for packaging such products as rindless natural cheese, meat loaves, cooked hams, etc. Some of these applications have already been tested with favorable indications.

It should be stressed, however, that until the seemingly insatiable demand for margarine pouches is satisfied—which time appears still to be a long way off—there will be little of this special film available for other uses, except possibly in quantities sufficient for experiment.

CREDITS: Film raw materials—Vinyl by Bakelite Corp., New York; nitrile rubber (Hycar) by Goodrich Chemical Co., Akron, Ohio. Compounding and extrusion of tube material, The Visking Corp., Chicago. Sheet material, Bakelite Corp. Fabrication of pouches, Shellmar Products Corp., Mt. Vernon, Ohio. Folding cartons—for Kraft Parkay, Marathon Corp., Menasha, Wis.; for Standard Brands Blue Bonnet, Sutherland Paper Co., Kalamazoo, Mich.; for Filbert's, The Butler Paper Products Co., Toledo, Ohio.

Design for impact

(Continued from page 142) creative pride was involved. No one's feelings were hurt. The manufacturer could proceed with confidence. In fact, he had a new sales argument. The package was "pre-tested."

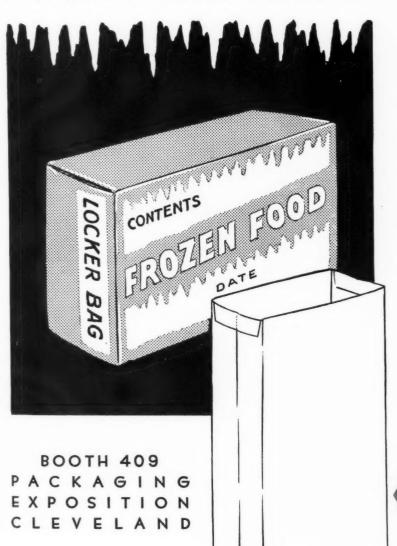
Still more conclusive is the sales test where two versions of the package are put on sale in two sets of equivalent outlets, making sure that price and display are balanced in both groups. Here the consumer votes with dollars quite unconscious of the fact that she is involved in a marketing test.

A third approach to determine color preference or design popularity would consist of display, side by side or jumbled, of equal quantities of packages in the various color combinations being checked. Here you might well assume that the color which sold out first was the best seller. In both the latter two cases, daily super-



CONTAINERS

PAPER OR FILM . PLAIN OR PRINTED



Flav-O-Tainers consist of a strong, wetstrength outer wrapper and a liner of fully heat-sealed thermoplastic film.

Flav-O-Tainers are constructed with cutout gussets which permit face-to-face sealing across the entire width of the bag. All corners and seams are permanently heat sealed, liquid-tight.

This duplex, single unit construction, requiring no inserts, makes Flav-O-Tainers perfect for use in home freezers and refrigerated lockers.

Flav-O-Tainers remain flexible and do not lose their toughness even at sharp freezing and holding temperatures. They assure their contents maximum protection against moisture loss and freezer burn.

You can use any conventional sealing equipment to close these easy-to-fill containers. Once filled and sealed, Flav-O-Tainers stack easily and occupy a minimum of space in freezers or lockers.

FLAV-O-TAINER

FREE SAMPLES—We will gladly send you samples of Flav-O-Tainers lined with various materials. Write for them today.

THOMAS M ROYAL & COMPANY

PHILADELPHIA 20 PABEAUMONT + BRYN MAWR

APRIL 1948



ROUND TUBES AND PACKAGES Available Now!

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available immediately! Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

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CAPS



• FOR BOTTLES

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ALL STANDARD SIZES AND COLORS AVAILABLE FROM STOCK

VOLUME PRODUCERS OF ALL SMALL THERMO-SETTING PLASTIC PARTS

LET US QUOTE ON YOUR CUSTOM CLOSURE, INHALER, OR ELECTRICAL MOLDING



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Canadian Plant: World Plastic Corp., Ltd., Hamilton Ont. New York Office: Jesselson Sales Company Inc., 347 Fifth Ave. visory calls are necessary to insure uniformity of price, display and other conditions. A store doing a heavy telephone business should be avoided, since the results may depend on a clerk's reactions rather than the public's response.

Converters' facilities available

In the last two decades, a great film-converting industry has evolved. The leaders are equipped with laboratory facilities to determine the best film or combination for your product requirements and for your pocketbook. War-drained creative art departments have been manned again with skilled artists. New and improved converting equipment is widely available to insure more consistent and higher quality. The ink chemists have come up with more brilliant and light-fast and faster drying inks. The buyer is assured of better value than ever before—but wherever you buy, whether films or foil, boxes or tin cans, don't overlook that priceless ingredient, that absolute necessity for self selling: "package impact."

Slack-packaging committee

W. E. Braithwaite of the National Bureau of Standards and Sumner C. Rowe of the Food and Drug Administration, met recently with members of the National Confectioners Assn.'s Slack Packaging Committee and representatives of the packaging machinery field at the Bureau of Standards offices in Washington, D. C.

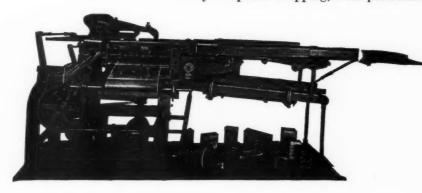
Mr. Braithwaite outlined the functions of the simplified practice division and offered to be of such assistance as possible to the industry in packaging matters.

He reported that simplification, as promoted by the Bureau of Standards, was not to be confused with standardization. Simplification could be applied to either the product or the container. He raised the question of whether or not there could be a simplification of sizes of trays, boards or wrappers.

Mr. Rowe of the Food and Drug Administration, emphasized the importance of strict compliance with Section 403(d) of the Food, Drug & Cosmetic Act, which states that a food shall be termed misbranded "if its container is so made, formed or filled to be misleading." He indicated that in many cases there was no general criteria by which "deceptiveness" of a specific container can be determined in advance. Each case must be decided on its own merits.

Mr. Rowe indicated that the candy manufacturers had a responsibility to act immediately and that "slack-packaging" reforms should not be considered a part of a long-range program. He offered to confer with candy manufacturers with respect to the design of their particular packages and offered such suggestions that seemed appropriate, strictly from his own personal point of view.

High quality food products deserve attractive packages to captivate the roving eye of the housewife. Impulse buying has become such a large part of her spending, that a package designed and wrapped to stop her and invite her to buy, is a "must" today. Superior wrapping, when performed on a Hayssen, adds that elegant touch



which helps to convince her of the merits of your product as worthy of a trial. If your present wrapping equipment seems to be suffering from inflammation of the joints and wheezes while in operation—check the advantages of the Hayssen Carton Wrapping Machine. Your package will look better when Hayssenwrapped. Write today—without delay.

HAYSSEN MFG. CO. . Sheboygan, Wis.

IT PAYS TO WRAP THE HAYSSEN WAY HAYSSEN WRAPPING
ELECTRONIC CONTROLLED MACHINES

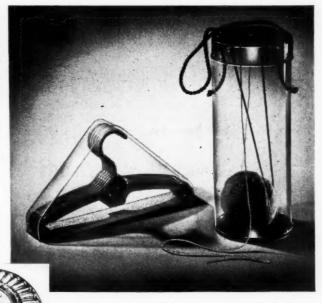
CUSTOM ACETATE DISPLAY BOXES

Any Size - Any Shape

To combine gleaming beauty with display and protection, Plastic Artisans designs and makes transparent containers of heavy acetate sheeting. These containers—round, square, or irregular shapes—are ideal for specialty boxes, for consumer packages and for many other uses.

These boxes are custom manufactured to your specifications, to fit your product. Our design department is adept at creating novel, unusual presentations for your merchandise.

For full details about these deluxe containers, made to size and shape you want, call or write today.



◆ Plastic Artisans also makes luxury displays. This "dial" counter display for Evening in Paris lipstick is designed to encourage the customer to examine the merchandise—a good method of stimulating impulse buying.



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70 Westchester Ave.,

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Rayco Flock

Want to make your new package a "Plush Job"? Use the new Coverings!

Use the new coverings made with Rayco Flock to make your new package pleasing to the eye and inviting to the touch. These rich flocked coverings are available from your supplier in all colors, on paper, cloth and cardboard for all box, wrapper and container purposes. And remember—to get the really fine effects of genuine suede leather, velvet, velour, etc., use the Rayco Flock specifically developed and proven for each job, specially processed under exclusive methods.

SUEDE FINISH - -

"Raymix"—a flock of rayon fibres under U. S. No. 427949 to produce a suede effect of utmost realism on any surface.

"Kingcote"—a cotton flock trademarked under U. S. Patent No. 423572, producing a suede effect at minimum cost.

PLUSH, VELVET AND VELOUR FINISH

"Raycote"—a flock composed of uniformly cut rayon fibres to produce on any surface a pile effect such as velvet, plush or velour. Made under U. S. Patent No. 2014947.

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Central Falls, R. I.

Plans for Western Show

Plans for the First Western Packaging Exposition and Conference on Packaging, Packing and Shipping were advanced at a meeting of Pacific Coast packaging leaders held recently in San Francisco.

The exposition, first major event of its kind ever projected for the Far West, will be held in the San Francisco Civic Auditorium, Aug. 10 to 13, 1948. Some 100 companies engaged nationally and regionally in the manufacture and distribution of machinery, equipment, materials, supplies and services in the fields of packaging, packing and shipping are expected to exhibit.

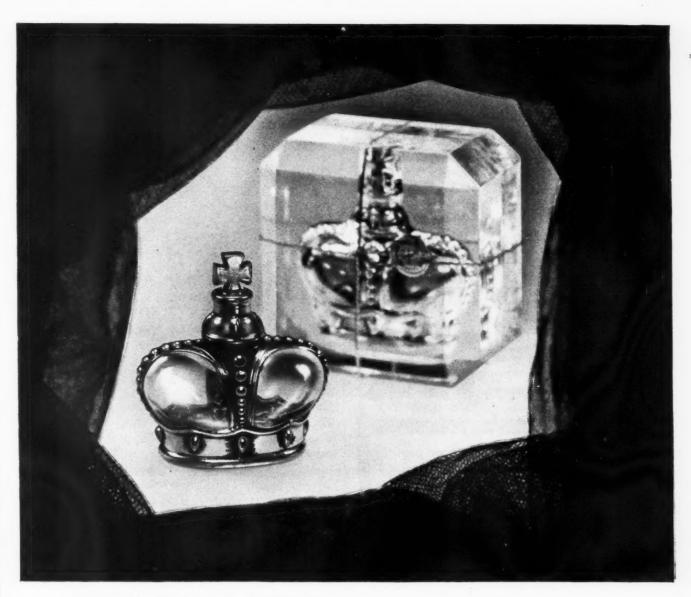
Concurrently with the first three days of the exposition, there will be held the First Western Conference on Packaging, Packing and Shipping. Leading authorities will address the sessions on topics reflecting current trends and major problems in these fields in the 11 Western states.

The recent San Francisco planning session represented a joint meeting of Western members of the exposition's advisory board and the planning council for the conference. After considering various policy decisions with respect to conduct of the exposition and the stimulation of attendance of package-using executives from all industries of the entire Far West, the group examined in detail the current and developing status of packaging, packing and shipping in the West, as a means of establishing the foundation for the conference program.

Among the subjects considered for inclusion on the conference agenda are: an analysis of materials and their characteristics, recent developments in packaging structure and design, enhanced methods of protection of contents against bacterial action, corrosion, infestation and atmospheric deteriorating agencies, the current status of pre-packing, pre-treatment for pre-packaging, developments in carloading techniques, the proper application of sealing agents, merchandising factors in packaging and packing, the testing of packaging materials, improvement in the use of packaging machinery.

Active formulation of the conference program will be entrusted to a committee to be appointed by Kenneth K. Dean, general chairman of the exposition and conference.

The Western Packaging Exposition and Conference are sponsored and managed by the firm of Clapp & Poliak, Inc., New York. General chairman is Kenneth K. Dean, publisher of *Good Packaging*. Members of the exposition's advisory board include Leo Blank, sales manager, Western Division, Stecher-Traung Lithograph Corp.; Peter D. Bowley, Peter D. Bowley & Associates; H. D. Chickering, promotion supervisor, Rayon Department, Cellophane Division, E. I. du Pont de Nemours & Co., Inc.; R. J. Christ, vice president and general manager, The Dobeckmun Co.; J. M. Cowan, manager for market development, The Dobeckmun Co.; William DeBack, vice president and



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"CROWN JEWEL" FOR PRINCE MATCHABELLI is a typical example of Kimble's ability to reproduce exquisite creative art in practical containers of universal appeal.

Here is gem-like fine glass... precisely matched to the most subtle details of the Prince Matchabelli design.

Here is the flawless result of dozens of Kimble techniques...polished bases and facets, ground stoppers, varied appliqué of metal and color. Kimble craftsmanship in glass containers is unexcelled anywhere in the world.

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sibly the least expensive! If your product is individual, it can afford to have . . . a Kimble individualized glass container.

Kimble can now produce your private mold containers in any form and quantity, on regular schedule.

SPECIFY KIMBLE FOR ASSURANCE OF CONTAINER QUALITY

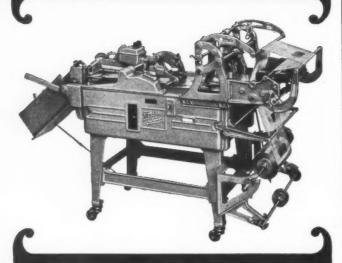
KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company



INCREASE PROFITS

By Making Your Own Bags!



Nearly every business is run for profit. We increase efficiencies, reduce costs, speed production—all to make a greater profit. Now, if you use bags in substantial quantity, there is a handsome profit slipping through your fingers if you do not make your own. There might be even more profit in bags than in your own products.

Simplex Hi-Speed Automatic Bag Making Machines handle all of the thermoplastic coated materials in rolls up to 30" wide and turn out up to 5000 heat-sealed bags per hour in sizes up to 12" x 20". Buy plain or printed roll stock and make your own—get the quality you want—control your inventory—don't depend on anyone for delivery of bags.

Tell us the sizes of bags you use and the quantities, and the prices you pay, and we will submit some interesting figures to you. It's a promise. Write us today.

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manager, Anderson-Barngrover Division, Food Machinery Corp.; William K. A. Ferguson, division sales manager, Reynolds Metals Co.; M. Gaukerud, sales research department, Container Corp. of America; H. L. Greene, vice president, J. L. Ferguson Co.; Robert D. Handley, advertising manager, Sylvania Division, American Viscose Corp.; E. J. Heimer, president, Heimer Equipment Co.; David S. Hopping, director of sales development, Celanese Plastics Corp.; William H. Jaenicke, president, Mailler Searles, Inc.; M. P. Junkin, sales manager, National Metal Edge Box Co.; George A. Mohlman, president, Package Machinery Co.; P. O. Shuttleworth, assistant manager, General Merchandise Department, Zellerbach Paper Co.; Paul Thompson, advertising and sales promotion manager, Sherman Paper Products Corp.; S. F. Thune, manager Pacific Coast Division, National Starch Products, Inc.; Spencer Tilden, vice president and Western manager, Arabol Mfg. Co.; R. H. Van Saun, packaging engineer, Container Corp. of America; Mills W. Waggoner, Better Packages; Jack F. Wear, Food Industries Engineering Equipment Co.

The planning council for the First Western Conference on Packaging, Packing and Shipping includes Chas. T. Beringer, president, Los Hermanos Vineyards; E. M. Burns, secretary-treasurer, Northwest Frozen Food Assn.; Earl W. Carlsen, research director, Washington State Apple Commission; R. L. Cheney, Glass Container Mfrs. Institute; M. A. Clevenger, executive vice president, The Canners League; H. C. Diehl, director and secretary, The Refrigeration Research Foundation; Irving Lyons, traffic manager, California Packing Corp.; Paul J. Messer, executive secretary, Pacific States Butter, Egg, Cheese and Poultry Assn.; C. B. Moore, director, Western Growers Assn.; Dr. E. M. Mrak, assocate professor of food technology. University of California; William Rabak, Western Regional Laboratory, U. S. Dept. of Agriculture; William J. Tanzey, vice president and director sales, The Borden Co.; Dr. Paul C. Wilbur, director of research, Food Machinery Corp.; L. B. Williams, director, California Dried Fruit Research Institute.

Better package-sealing program

The Gummed Industries Assn. is launching a nationwide educational program on better package sealing, according to Philip O. Deitsch, managing director.

The goal sought is to cut down losses from goods damaged in transit by educating shippers, carriers and major post office departments throughout the country.

The program will consist of a tour of the country by two field men who will give presentations to member manufacturers who, in turn, will make similar presentations to their accounts. A sound film has been made giving detailed instructions on how to apply gummed sealing tape for most effective protection, how to use and care for tape dispensers and how to store tape.



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So EASY TO DO—to make them reach for yours instead of one of a myriad of competitive products. Transparent, rigid, See-Thru containers created by Geo. V. Clark Co. Inc. get reach-for-it action that builds sales.

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Don't say it's not for my product. You might be wrong!

Get all the facts about GVC see-thru containers directed specifically to your packaging problem. You might just as well profit from what they can do for the sale of your product.

This dispenser-display, custom designed for 3 Daughters, Inc., gets preferred counter positions. Attractive, colorful, self-service. Another G V C sales-getter success.





Sun Glo Studio has their Lynn Bogue Hunt interpretations of Kings of the Turf revealed in all their glory in a See-Thru container by G V C on the beautiful highball glasses. GEO • V • CLARK

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26-15 Fourth St., Astoria 2, L. I., N. Y.
Gentlemen: Send us samples of your see-thru
packaging successes. I am interested in rigid,
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PRODUCT THAT "1948 Look" State of control of the control of the

WITH Lusteroid VIALS and TUBES

Lusteroid containers are so distinctive that they "lift" your products above competition and make them more attractive to the buyer through novelty and color.

These feather-light vials and tubes are tough, resilient, unbreakable. They come in all colors of the rainbow — clear or opaque. They cut shipping, handling and labeling costs, too.

Sizes from ¼" to 1¼" in diameter and lengths up to 6" with cork, slip-on or screw-cap closures. Write for descriptive bulletin.



British design center

Establishment of a design center for the British packaging industry, similar to the center recently set up by the jewelry industry in England, is reported to be currently under consideration. Prime mover in the idea is the Council of Industrial Design, a government-sponsored group composed largely of non-commercial interests. The Council's efforts to convince industry that it knows something about designing for industry have not, as yet convinced manufacturers of the value of design, according to reports.

The argument advanced by the Council is that there is a need to stimulate interest in design and that this duty can best be performed through the efforts of such a national center.

Substantial financial assistance would be given by the government if the packaging industry decides to set up the design center, according to a statement by the Council. The general policy of the center and execution of its aims would be determined by a governing body, the majority of whose members would be nominated by the industry.

Noel Carrington, member of the Council, presented its case to the newly formed Institute of Packaging in London. He said, "The Institute is already concerned with the establishment of a library and information service. This should include, in addition to a collection of books of interest to all sections of the industry, together with trade and technical journals of its own and related industries, the compilation of an information bulletin on design which would keep members abreast of information in their industries. The library would also contain a photographic section which would maintain a pictorial record of good designs, both past and present, of home and foreign packages. Some of these services may be performed already by technical journals and there is no point of duplicating them wherever this is the case."

Mr. Carrington also outlined a training program for designers which would include suggestions to educational authorities by the packaging industry for improved designer training, continuous relationship between the industry and schools and the organizing of foreign tours or travelling scholarships for promising students.

On the subject of exhibitions which the design center might sponsor in cooperation with the packaging industry, Mr. Carrington said, "These would be both public and private (open to the trade only). Exhibitions open to the public would show the industry's best current productions, while the private exhibitions would be intended to show member firms the best of current designs overseas and to illustrate, for example, the relation existing between packaging and display methods."

Overseas market research projects undertaken jointly by the Institute and the proposed design center were also included as a way in which the center might be utilized. 17th AMA ACKAGING EXPOSITION An Invitation to visit the Decotone displau ... AMA Packagin-Look for good things

Decatone has developed See you there!

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PACKAGING PAPERS Converted Papers SPECIALTY PAPERS
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9 out of 12 buy Riegel

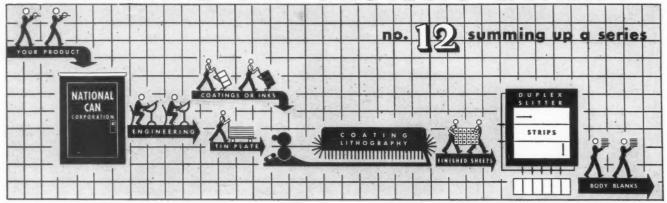
Nine of the twelve largest baking companies buy Riegel Papers regularly

Among bakers, and in many other fields, you will find most of the sales leaders are regular Riegel customers. They recognize our ability to produce packaging and industrial papers that combine technical excellence with economy and production efficiency. This widespread confidence in Riegel is perhaps the best reason why your company—whether large or small—should see if we can also serve you. Riegel Paper Corp., 342 Madison Ave., N. Y.

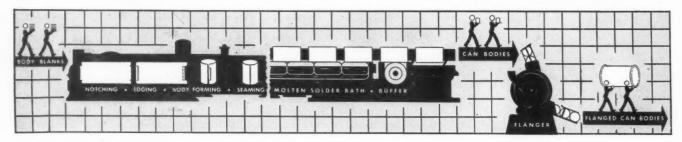
Ricgel Papers We produce over 600 different packaging, printing, converting and industrial papers. If we don't have what you want, we can probably make it.



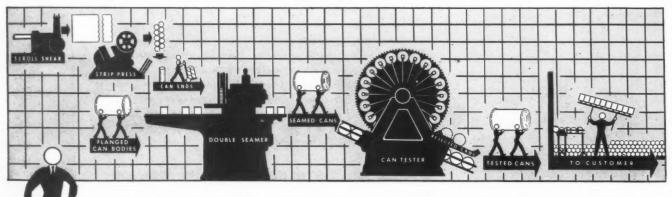
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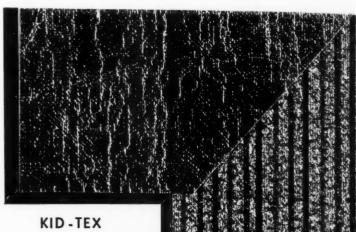
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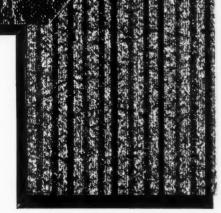


Both Kid-Tex and Gold Brokay have a tough, wear resistant, scuff resistant plastic coating. They are handsome, eye-catching materials that look and feel like natural kidskin, yet cost much less.

These long lasting materials can be cut, sewn and pasted. You can use Kid-Tex or Gold Brokay wherever you would use kid.

Kid-Tex and Brokay come in gold and silver. Both are available in rolls 35" or 36" wide, 25 or 50 yards long.

Write for Kid-Tex and Brokay sample books.



GOLD-BROKAY

Gustave RUBNER Inc.

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50 YEARS OF SERVICE

Best Sellers in the package parade are those labels and cartons that make the customers look—and buy... that serve as constant reminders, month-in

Rossotti helps keep your product at the top of the buyer's list. For perfect purchase-appeal, mouthwatering eye-appeal, surefire displayappeal, Rossotti Labels and Cartons have few equals.

50 years of specialized service is one reason Rossotti has led the field in dynamic sales-effective packaging. Now, with modern, fully-equipped plant on each coast, we can assure prompt, fast, dependable service from coast-to-coast. When a packaging problem confronts you, consult Rossotti-specialists since 1898.

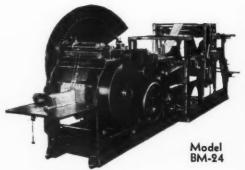


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Manhasset gives you rapid, 2 to 4 month delivery on most of these sturdy, quality machines. Even where adaptations of standard designs are required, you can get prompt service and fast delivery. Each unit is designed for speed and ease of operation. Every Manhasset machine is priced competitively.



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Makes up to 1,200 quality bags per minute. Special patented design allows greater production at slower machine speeds. Bags 11/2" to 121/4" wide and from 5" to over 19" long. Ideally suited for paper, glassine and foil; plain or preprinted in flat or square bags; either single or duplex.

REWINDER & SLITTER

Better rolls and faster unloading assured by 2 rewind shafts. May be used with mill roll stand or printing press. Equipped with water-cooled cylinders for quick setting of printed cellophane and other special webs. Other models available with or without water-cooled cylinders and slitting attachments. Standard sizes from 18" to 60" web capacity.



ANILOX PRESS-2, 3, 4 COLORS

All cylinders and ink rollers easily thrown in and out of contact. Vertical and horizontal register while press is in operation. Easy to raise or lower ink pot. Prints on cellophane, foils, papers. Compact and ruggedly built, in various widths.



Model AP-424

TWO-COLOR ANILINE PRESS

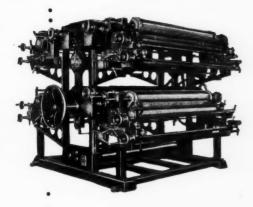
Prints on all kinds of cellophane, foils and papers. Can be used with coating, and other converting machines. The AP-224 can be used as a rol press and while economical in price has most of the essential features of the larger presses.



Model AP-224

MULTICOLOR ANILINE PRESS

52" wide web. Repeat range for one-up, 77/8" to 31". Equipped with necessary easy throw-offs between all ink rollers and cylinders. All impression cylinders driven from one central drive. Register control while press is running. Press built in various other widths.



Model ARP-452

Write for detailed specifications and prices.

MANHASSET MACHINE CO.
255 EAST 2ND STREET P. O. BOX 231 MINEOLA, N. Y.

Are you using the best wrappers your money can buy

Is your product getting all the protection it needs? Does it have the attractive appearance you want it to have?

Here's what Patapar Vegetable Parchment offers you.

PROTECTION

Patapar gives you a wrapper that has high wet-strength—that resists grease. And being produced from pure cellulose it has no odor, no taste. Patapar safeguards natural flavor and freshness.

BEAUTY

Patapar has a rich white texture that is a joy to behold. Beautiful effects are obtained by printing it with bright colors, spotlighting brand names and selling messages. Our plants are specially equipped for printing Patapar economically by letterpress or offset lithography.



KEYMARK

The Patapar Keymark is nationally advertised as the symbol of wrapper protection. You are welcome to include it on your printed Patapar wrappers at no extra cost. It's a way to remind customers that your product is well protected.

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The packing efficiency, the light weight, the easy handling and shipping qualities of every H-A container are the combined work of our production, engineering and laboratory departments.

The design of every H-A glass container is the work of our design department PLUS the advice of the most famous of all packaging experts-Mrs. Homemaker. Each H-A container incorporates the needs and suggestions of the consumer.

H-A means Home Approved.



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THE RODGERS FILLER

SAVES MONEY 3 WAYS

1. because it does many filling jobs

The versatile Rodgers Filler handles all kinds of powders and pastes, including tacky colloids. It fills any size rigid or flexible container from 1/2 oz. to 10 lbs.

2. because it operates faster

Users have actually clocked the speed of the Rodgers at less than 1 second per 5 oz. container over sustained operating periods. Its special metronomic timer (no foot pedal to slow output) can keep pace with even the fastest operator. Change-over from a 1 oz. to a 10 lb. package takes only 10 seconds—no tools or mechanic needed.

3. because it costs less to maintain

All moving parts ride on sealed ball bearings. They are located above the fill tube and can't get clogged with powder or paste. Special design by Crager completely eliminates clutch breakage or overheating.

Other Rodgers Products:

Stainless Steel Tanks Stainless Steel Kettles Tube Clips

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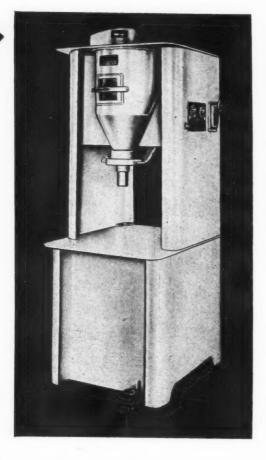
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For further details about any of these products, write for your copy of free descriptive Bulletin M-4.

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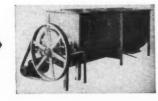
Batch Powder Mixer

For uniformly mixing, stirring and sifting any number of ingredients. Self cleaning. 400, 600, 1000, 2000 and 3000 lb sizes. Deliverable immediately. These mixers are also furnished made of stainless steel.



Model 6-A Tube and Jar Filler

Hand operated for smaller production runs. Fills tubes and jars with pastes, ointments, semi-liquids. Interchangeable nozzles. Speeds of 20–30 tubes per minute.



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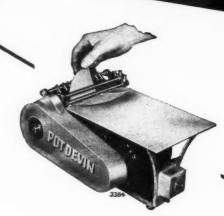
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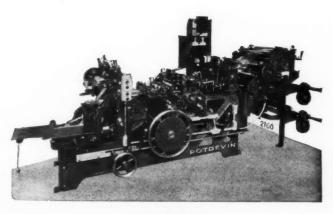


. . . for labeling bottles, jars, cans, cartons, boxes, etc., faster and more economically. Cuts labeling cost up to 30% .



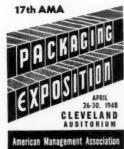
POTDEVIN CONVEYOR GLUERS

. . . for production line gluing. Sheets of various shapes and sizes can be fed alternately on this machine, assembly line style. The even all-over glue coverage reduces spoilage and eliminates most of the reasons for inferior products.



POTDEVIN BAG MACHINES

Paper, glassine, cellophane, etc.. are converted into plain or printed, single or multi-wall bags on high-speed POTDEVIN Bag Machines. Each machine is adjustable to make a variety of sizes.



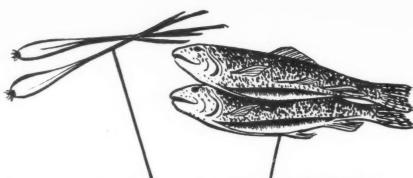
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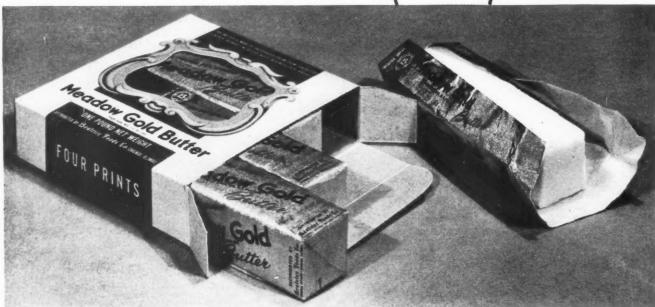
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Butter



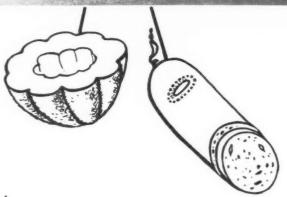
should never be known by the company it keeps!



Any woman can tell you about it. Butter is overfriendly! It borrows enthusiastically from its neighbors in the refrigerator—flavors, odors, reminders of this and that. An unpleasant habit! But here's a wrap that keeps butter safely out of bad company—an aluminum foil coated with VINYLITE Brand Plastics. It not only keeps odors out—it keeps flavor and freshness in. A tough job for a packaging material.

The VINYLITE plastic coating contributes a big assist—by protecting the foil as well as the butter. Without it, salt or butter fat corrosion might attack the foil and spoil a good job well done. The coating also contributes to the tightness of the wrap, the moisture resistance, even the transfer of flavor—for this tough, pliable, odorless, tasteless film of VINYLITE Brand Plastic coating is itself impervious, airtight and moistureproof.

Foils coated with VINYLITE Brand Plastic have many uses in protecting foods, pharmaceuticals and other perishable or easily contaminated products. Sometimes the plastic coating serves a double purpose—makes the package easy to heat-seal airtight. If you are confronted with a perplexing question that has to do with packaging, you will be wise to get in touch with BAKELITE packaging specialists. Write Department CN-55 for information on the many packaging applications of VINYLITE Brand Plastics.



VINYLITE

PLASTICS

BAKELITE CORPORATION, Unit of Union Carbide and Carbon Corporation 11 30 East 42nd Street, New York 17, N. Y.

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FOR SALE: Automatic Package Waxing Machine. Complete with variable speed conveyor, wax pump and heating elements at all points. Will take packages automatically from package line and deliver them coated. Can be used for any liquid coating. Used one year. Cost new \$6,000.00. Will sacrifice. Write Box 662, Modern Packaging.

SALESMEN: Preferably with experience selling laminated and coated products such as are listed in our advertisement in this issue of Modern Packaging. Excellent territories available to right parties. State qualifications, age, experience and territory covered in first letter. Also if interested in salary or commission and amount. Floyd A. Holes Company, Bedford, Ohio.

PLANT MANAGER: with know how experience in all phases of transparent plastic acetate container fabrication, and also qualified as plastics packaging consultant, desires position in same or allied field, with a well established progressive organization. Box 652, Modern Packaging.

FOR SALE: Corley-Miller, Model BL-36-2DG4 Sheeter-Gluer. Complete with all equipment 110 V, AC motor, electric eye attachment, special 96" conveyor table. Never used. Box 663, Modern Packaging.

WANTED—PRINTING Superintendent: Unique opportunity for a man well grounded in rotogravure, oil, and aniline printing. Must be capable of assuming full executive responsibilities for quality and production. Top salary to a topflight man. Job located in Ohio. Write background details to Box 647, Modern Packaging.

SALESMAN WANTED: Experienced in protective packaging materials, wrapping papers, greaseproof papers, pressure sensitive types. Box 664, Modern Packaging.

SALESMAN TO sell top quality line of women's uniforms to industrial plants. Our uniforms, sold through catalog, can be carried in conjunction with your present line. 7% commission plus substantial monthly bonus on quota. Exclusive territories. Reply by letter giving complete details of background. Claire Frocks, Cincinnati, Ohio.

WAR SURPLUS Materials Wanted. Greaseproof paper A & C type 1. Lead foil-lined barrier materials. (Reynolds A50, A51, Shellmar 903, Valley 2A, in rolls, sheets & bags) Waterproof Kraft & creped paper—"Kimpak"—cotton wadding—Pressure sensitive tapes. Box 665, Modern Packaging.

1—WORLD "STRAIGHTAWAY" automatic labeler. 2—Arenco automatic tube filters, stainless construction. 1—Kiefer visco cream filler. Write Dept. M. Chemical & Process Machinery Corp., 146 Grand Street, New York 13, N. Y. WOrth 4-8130.

REPRESENTATIVES FOR several territories wanted for automatic and semi-automatic carton sealing machinery. Must have knowledge of packaging. Reply must state full particulars including age, experience, territory covered, type of equipment sold, also if interested in commission or salary and what amount. Replies treated confidentially. Box 666, Modern Packaging.

FOR SALE—I Simplex bag maker for cellophane bags up to 33" in length. Brand new. In factory crate at less than factory prices. National Soda Straw Company, 2230 So. Union Avenue, Chicago, Illinois

FOR SALE: New Simplex Bag Making Machine. Elec. eye. Superior Biscuit Co., Chicago 12, Illinois.

HAVE EXCELLENT following among paper jobbers in Minneapolis. Can handle a few more good lines. Associated Products, 415 South Sixth Street, Minneapolis.

ITALIAN BOX maker wishes to introduce to an American box manufacturer an exclusive shoe box "GFG 1759" which has been patented in Italy. The product is elegant, low cost, sturdy packaging and saves 75% of shipping and storage space when boxes are empty. For further information write Mr. Philip L. Manganaro, manufacturers agent, 354 Bloomfield Avenue, Caldwell, New Jersey.

WANTED: TEA Bag Machines. Pneumatic Scale Duplex Heat-Seal Tea Bag Machines—complete with tagging device—must be in sound operating condition and have a rated speed of 160 P. M. Give serial nos. and price. Reply Box 668, Modern Packaging.

FOR SALE: Quantity of Balsam #5 Foot Presses. New and used. Good for light metal work, paper, or novelty trades. \$50.00 each, buy all or part. Phone DAvenport 6-2951. Braun-Crystal Mfg. Co., 69-01 Metropolitan Avenue, Middle Village, Long Island.

DISTRIBUTORS WANTED by substantial manufacturer of new protective packaging corrugated specialty (patent pending)—Revolutionary in principle of industrial packaging application—Characteristically high dollar volume sales. If interested, please give complete information as to Territory covered—Number of salesmen—General experience in industrial packaging—Other lines handled—Several references. Box 669, Modern Packaging.

USED HEAT sealing unit for sealing 4" wide pouch; thermostatically controlled, 110 volts A.C. Box 670, Modern Packaging.

FOR SALE: Conveniently located small modern laminating and coating business. Equipped to laminate foil, acetate, vinyl, paper, cloth, etc. Latest high speed coating and drying devices, electric hoists, sheeter, slitters, embosser, reverse roll, rotogravure, roller, knife, spray and hot melt coaters. Potential capacity \$3,000,000.00 to \$5,000,000.00 annually. Sale price \$300,000.00 including buildings, formulas and confidential data. Principals only. Box 671, Modern Packaging.

FOR SALE: New CECO—latest model folding box package sealing machine, with special automatic self-inking imprinting or code attachment, in use only 2 weeks. Sale, due to change of packaging. Portable on wheels, and adjustable, can accommodate following size cartons: Minimum: length, ½"; width, ½"; depth, 2"; Maximum: length, 3"; width, 2½"; depth, 6". Write Stelz Co., 257 West 17 Street, New York, N. Y.

PACKAGING ENGINEER Wanted—A large midwestern company seeks the services of a graduate engineer with at least five (5) years' experience in packaging in glass or metal containers and who understands the equipment involved. Assignments will include origination of packaging layouts and improvements of existing operation. Must be willing to travel. Write Box 667, Modern Packaging.

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Booth 615, CLEVELAND PACKAGING SHOW

Now you can find out why the whole packaging industry is talking about the new ROTO BAG MACHINE.* See the ROTO on exhibition, in production, in Booth 615, at the AMA Packaging Show in Cleveland, April 26 to 30.

You'll see a high-speed heat sealing machine that makes stronger, better bags from such coated materials as cellophane, diafane

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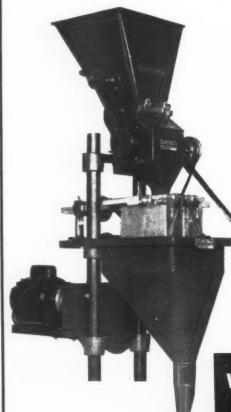
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NET WEIGHER

Illustrated semi automatic unit is adapted for smooth and faster operation on non free flowing products such as coarse or fine ground coffee. Normal tolerance $^1/_{16}$ oz up to 35 per minute and is rated at 4 ozs to 3 lbs approximate; 45 one pound packages per minute is not unusual and employed in many cases with a double spout discharge hopper.

Specific types are recommended to meet the weight range and the product whether coffee, teas, rice, beans, macaroni, dog food, salt, cereals, meal or chemicals. Delicate material, nutmeats or confectionery ask for our vibrator feed models from $\frac{1}{2}$ oz up.

Besides these are the standard FL gravity flow fillers and the 100 or more per minute automatics. Write for WEIGH RIGHT circular No. 44.

Features: Model B with PF K power feeder, simplicity with no overbalance drag or springs, short fall feed stream, clean

sensitive latches, quiet exclusive WEIGH RIGHT oscillating wing design, double standard stability and accurate feeder with variable speeds. Integral floor mounting.



WEIGH RIGHT AUTOMATIC SCALE COMPANY

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ASSOCIATES

8 So. Dearborn

Chicago 3, Ill.

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VUEPAK

RIGID TRANSPARENT PACKAGING MATERIAL



When hardheaded merchandisers pick a package winner, they pick the tops in sales ability. And sales ability is the reason why this Wright ruffling package using Monsanto's transparent Vuepak, is

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Sales appeal . . . through Vuepak's famous seeappeal . . . won top favor from the jury of outstanding merchandisers who judged this contest for packaging in the low cost field.

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First prize winner over 300 final entries in 12th annual national packaging contest conducted by Syndicate Store Merchandiser. Vuepak: Reg. U. S. Pat. Off.



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MONSANTO CHEMICAL COMPANY, PLASTICS DIVISION Dept MPKP 4, Springfield 2, Mass.

Please send me full information on Monsanto's Vuepak for Packaging.

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aybe your business isn't as exciting as answering a four alarm fire,
and you're probably glad of it. But just as a fire truck is fitted for
hard work right down to dependable Champion Spark Plugs under the hood,

so should every part of your sales machine be equipped

for hard selling right down to the product carton.

Good packaging helps to sell more of any product, and that's why so many

merchandisers, like Champion, buy Michigan Cartons. Their sales machines keep rolling along at top speed aided by superior cartons printed in crisp clean colors on fine white board.

Join Champion, and the many other nationally known mass carton users who have used Michigan Cartons for many years. You can depend on Michigan Carton

for packages of great sales appeal and better product protection.



.... millions of housewives choose



for packaging foods for home freezing

Such overwhelming consumer choice points the way to successful sales for the manufacturer who chooses Shellene for his own product. A plastic film, Shellene is one of the most interesting packaging materials developed in years. It is clear, strong and flexible . . . will not crack or embrittle at 50° below zero. It has a very low WVTR, is greaseproof and waterproof. An odorless material, it provides complete protection

against permeation by outside odors. It is heat-sealable. Available in square bags, sealed end tubes and pouches, printed or unprinted, also in printed continuous rolls. If yours is a product requiring extraordinary protection . . . if you would like a package the housewife can reuse as a refrigerator food bag . . . better investigate Shellene.

*T.M. Reg. U.S. Pat. Off.

Sales Offices in Chicago, New York, Cincinnati, Denver, Detroit, Kansas City, Minneapolis, San Antonio, Atlanta, Baltimore, Boston, Philodelphia, Pittsburgh, Los Angeles, Salt Lake City, San Francisco, Seattle.

